K. Faselius Gr. 7, 152 i.

ELEMENTS

OF

MEDICAL JURISPRUDENCE:

OR,

A ſuccinct and compendious Deſcription of ſuch Tokens in the Human Body as are requiſite to determine the Judgment of a Coroner, and of Courts of Law, in Caſes of Divorce, Rape, Murder, &c.

TO WHICH ARE ADDED,

DIRECTIONS FOR PRESERVING THE PUBLIC HEALTH.

K. Faselius (1)

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MVSEVM
BRITANNICVM

PREFACE.

THE foundation of this little Work is taken from a Publication made at Geneva in the year 1767, *called,* 'Joh. Fred. Faſelii Elementa Medicinæ Forenſis.' *This was a claſs-book of a learned Profeſſor, but I imagined ſuch a form, and the endleſs diviſions which he has adopted, would appear tedious to an Engliſh reader, who generally admires works more in detail. I have therefore admitted only the materials of that publication, and have digeſted them into regular chapters, in which I have endeavoured, as much as poſſible, to follow the order of nature, beginning with births, and ending with the diſſolution of our frame.*

By altering the form too, I have not been obliged to adhere ſtrictly to the text, but have varied from it very conſiderably, and ſome chapters I have entirely added, as that upon Madneſs, &c. whilſt others I

have

have omitted as uſeleſs in this Country, as particularly one on Tortures, &c. But I hope, I have neither added what is tedious, nor omitted what is neceſſary to be known. As nothing of the kind hath ever been publiſhed in this Country, I was willing to take the aſſiſtance of a learned foreigner, rather than travel a tract unbeaten, by myſelf. I need ſay nothing concerning the utility of ſuch a Work: it will readily be pointed out to every ſerious mind. Life and death are objects too important to be ſported with in the manner they are ſometimes: nor ſhould the valuable connections of our fellow-citizens be ever ſacrificed to the ignorance of the faculty, the caprice of a court, or the artifices of revenge and diſappointment.

SAMUEL FARR.

Curry-Rivel,
Nov. 22, 1787.

CON-

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INTRODUCTION.

THERE is a kind of medical knowledge, which is not ſo much concerned in the cure of diſeaſes, as in the detection of error and the conviction of guilt. A phyſician, a ſurgeon, or a coroner, is often called upon to make a depoſition of what he knows concerning ſome particular tranſactions in a court of judicature. Such perſons then ſhould be well acquainted with the animal œconomy, and with thoſe views of the ſcience which, in foreign countries, have been dignified with a peculiar name, as the medicine of the courts, legal medicine, or medical juriſprudence.

What part of the ſtudy of phyſic.

Whom employed.

Where exhibited.

Name.

This knowledge, in its more extenſive ſenſe, is divided into two different kinds, in one of which is explained thoſe rules by which a judge may form in a court of judicature, an accurate opinion of the cauſe which comes before him : in the other, an acquaintance is acquired with the beſt methods of preſerving the health of our fellow-citizens. The firſt part is again divided into three, as the depoſition is made in the civil courts, in the criminal courts, or in the eccleſiaſtical courts. But as the courts of foreign countries are conſtituted upon different principles from thoſe of this kingdom, I ſhall not follow the example of our learned profeſſor, in arranging the rules of this buſineſs in that diviſion, but ſhall give them in different chapters, according to the order of Nature, and let the reader apply them as he ſhall think proper.

How divided.

Judicial cauſes.

Health of community

Natural diviſion.

CHAP.

CHAP. I.

OF PREGNANCY.

THERE are ſo many deciſions, both in civil and criminal courts dependent upon pregnancy, that an accurate knowledge of this affection is abſolutely neceſſary to be acquired before a determination is made. And notwithſtanding there may be an apparent indecency in the expoſition, yet truth, property, and perhaps a life, are not to be ſacrificed to a falſe delicacy, a miſtaken modeſty, or a love of eaſe.

Many deciſions depend on a knowledge of it.

A greater expanſion of the abdomen than common, as it creates in a female the idea of pregnancy, may depend upon a fœtus, or any other body, filling up the womb, or parts adjacent. If it be any foreign body, it is called a mole, or falſe conception;

Marks of Pregnancy.

Diſtinguiſhed from other appearances.

Mole what.

tion; if a fœtus, true pregnancy. This too is of two kinds, ordinary and extraordinary. The firſt, when one or more fœtuſes are lodged in the hollow of the womb itſelf; the latter, when they are depoſited in the ovarium, the fallopian tube, or the general cavity of the abdomen. The ovarium is that ſubſtance in the female body, which anſwers to the teſticle in that of the male, and is ſuppoſed to contain the germen of the future animal. The fallopian tube is a duct which conveys the male ſemen from the womb to the ovarium, and is ſuppoſed to embrace the uterus in the time of conception. It is natural to ſuppoſe then, that ſometimes the fœtus may be lodged in theſe bodies, and ſeek an exit which it can never obtain.

Ordinary.

Extraordinary.

It is not uncommon for women of abandoned characters, or even married women, to conceal and deny their ſtate of pregnancy; and in ſuch caſes, no

accu-

accurate judgment can be formed till a proper examination be made by a medical perſon, and thoſe ſigns of true pregnancy be diſcovered which are generally acknowledged. Theſe ſigns are various, and they may be diſtinguiſhed into certain, uncertain, and falſe. Signs.

The certain and moſt common, and which may be taken about the time when half the geſtation is compleated, are, Certain.

1ſt. A ſwelling of the abdomen, which ariſes from no morbid cauſe, which continues to increaſe ſo, that it extends from the lower part even to the ſummit, which has a ſhining appearance, and which is peculiarly ſharpened about the navel. At the ſame time a troubleſome ſenſation, peculiar to ſuch a ſituation, is perceived, and other ſigns of pregnancy occur. Swelling of abdomen.

2d. The orifice of the womb is thicker, more ſpongy, ſoft, and widened; Orifice of the womb altered.

dened; is ſhorter, and exhibits neither a conical nor cylindrical figure.

Motion of fœtus.

3d. A motion of the fœtus is perceived in the womb.

Suppreſſion of menſes.

4th. There is a ſuppreſſion of the menſtrual flux, when it cannot be accounted for from ſome evident diſeaſe, and when the ſymptoms which accompany it do not remit, as is the caſe when it ariſes from ſome other cauſe.

Swelling of breaſts.

5th. A ſwelling and hardneſs of the breaſts, with an inflation of the nipple, and the veins of the breaſts aſſuming a blue colour. The diſk round the nipple is of a duſky brown colour, and the little eminences are much enlarged.

Milk in breaſts.

6th. A lymph flows from the breaſt upon preſſure, which are ſtreaks of true milk.

Uncertain ſigns of pregnancy.

The uncertain ſigns of pregnancy, are frequent vomitings, eſpecially in a morning; a conſtipation of the belly; an incontinence or ſuppreſſion of

of urine, difficult reſpiration, irregular appetite, a fondneſs or averſion to particular kinds of food, head-ach, vertigo, pain of the teeth, yellow ſpots in the face, the belly growing flat, a deſcent of the orifice of the womb, enlargement of the veins, ſwelling of the legs and feet, and pains in the loins, &c.

The falſe ſigns of pregnancy have ariſen from ſome ſuperſtitious notions which are now exploded, and therefore we ſhall omit to mention them in this place. Falſe ſigns.

It appears, however, that no accurate judgment can be formed, but from the certain ſigns; and a knowledge of theſe can only be acquired by a minute examination and immediate inſpection of the parts. This, upon account of decency, is generally committed to midwives, ignorant perſons, who have no knowledge of the animal œconomy, and may eaſily be deceived, How to form a judgment.

ceived. It would be much better then, that this office ſhould be entruſted to the more regular practitioner, who being a perſon of education, would add the influence of his judgment to his examination, and would not be content with a ſingle enquiry, which may be uncertain, but would frequently repeat it, till he had perfectly aſcertained the truth.

Feigned pregnancy.

How diſcovered.

Women ſometimes likewiſe feign themſelves to be pregnant when they are not ſo. The abſence of thoſe ſigns before-deſcribed, would be ſufficient to confute them; but, as much artifice is often uſed upon ſuch occaſions, it may be neceſſary to examine a little further, and here the following ſigns preſent themſelves: An improper age, either too tender or too perfect; a preternatural defect of the menſes, even in thoſe of a fit age; too great a flow of them; a copious and inveterate fluor albus; various

Signs.

diſeaſes

diſeaſes of the vagina, as the orifice of it being entirely ſhut, or a junction of its ſides, ſo as not to admit an entrance; various diſeaſes likewiſe of the womb, ſuch as a ſchirrus, or fleſhy excreſences growing up in it, or its mouth being entirely cloſed.

CHAP.

CHAP. II.

OF PARTURITION OR CHILD-BIRTH.

Parturition what.

PARTURITION may be received in ſeveral ſenſes. At one time it means the action of bringing a child into the world: at another the child itſelf, which is received into being.

When taken in the firſt ſenſe, it is divided into ordinary and extraordinary. The ordinary is, when the delivery is made in the common and uſual manner, or rather by the common paſſages, notwithſtanding any difficulties which may occur in the operation: for this is again divided into natural and preternatural, or artificial. The extraordinary delivery is when it is performed by the Cæſarean operation, which is an extraction of the

Ordinary.

Extraordinary.

Cæſarean operation.

the child, by making an inciſion thro' the abdominal muſcles into the uterus. This is ſeldom performed upon the living mother, but may be, and is indeed always adviſeable, ſhould the mother die before ſhe can be delivered, and life is perceived in the child. In this way ſome great perſonages, and particularly our Edward VI. is ſaid to have been born. Another method lately propoſed in France, and abſolutely put in practice upon living ſubjects, is, by dividing the cartilage which binds together the bones that ſurround the womb, and thus enlarging the opening. This may likewiſe be called extraordinary, though the delivery be made by the natural paſſages; yet the ſtrictneſs of terms confines it to thoſe labours which are made by paſſages different from the common.

When the word parturition relates to the child itſelf, it may denote the time when it is born, the conforma-

When parturition relates to the child.

tion

tion of its parts, or the external figure which it preſents, the ſtate of its life, and the number which are brought into the world.

Time of birth. When it relates to the time in which it is born, it may be conſidered

Perfect. either as perfect or mature, or immature and imperfect. The former, when geſtation has been carried on at leaſt

Imperfect. nine months: the latter, when it is completed before that time; and in this laſt caſe, another diviſion may be

Abortions. made into abortions, where the delivery is made before the ſeventh

Premature. month; and premature births, where the child is born between the ſeventh and the end of the ninth. To this head alſo belong too late deliveries.

Signs of immature child. The ſigns of an immature child are taken from the following particulars.

Length. 1ſt. From its length, for if it be not one foot long, we may be nearly certain that it is not completely formed.

2d. From

2d. From its weight, which ſhould exceed five pounds. Weight.

3d. From the figure of the head, &c. An incomplete child has a deformed face reſembling an old perſon, with a wide mouth and ſlender ears like membranes; its eyes are ſhut; the hair of its head is of a whitiſh caſt; the diviſion between the bones of the ſkull, called the rhomfoidal ſuture, gapes wide; the bones themſelves are moveable; and the lips of the mouth reſemble pieces of bloody fleſh. Figure of parts, &c.

4. From its habit of body, which is for the moſt part thin and tender, and covered with a ſhort down, and is of a reddiſh hue, particularly on the extremities and the face. If it be a male, the ſcrotum is of a round figure, and the teſticles are not contained in it. Habit of body.

5th. From its limbs, which are thin and weak, and the nails upon its fingers Limbs.

fingers are ſoft, ſhort, not extending beyond the fingers; nay, if it be very ſmall, as of one or two months, the nails are by no means perceptible, either upon the fingers or the toes.

Conformation of bones.

6th. From the conformation or conſtitution of its bones; for it is evident from experience, that in every month of geſtation, there is ſome alteration in this reſpect; ex. gr. in a fœtus of five months, the orbits of the eyes are entirely formed into bony ſockets, and in one of ſeven months, the ſmall bones, ſubſervient to the organ of hearing are ſo perfect, as ſcarcely to differ from thoſe of a complete child.

Umbilical cord.

7th. From the umbilical cord, which is very ſlender.

Other circumſtances

8th. From other curious circumſtances which attend this little embryo, ſuch as a conſtant indulgence in ſleep, an abſtaining from crying, an intolerance of cold, an indiſpoſition to ſuck,

ſuck, or to uſe its limbs, or the muſcles of other parts, ſuch as thoſe which are ſubſervient to the evacuation of urine, or the depoſiting of the meconium.

The ſigns by which we diſtinguiſh a perfect child are taken, Signs of perfect child.

1ſt. From its ſize, its length being at leaſt one foot ſix inches. Size.

2d. From its weight, which ſhould be at leaſt ſix pounds. Weight.

3d. From the formation of its bones, which is known only by experience. But in general a child can hardly be called complete, all whoſe bones and every part are not entirely formed, though age may give ſome addition to their ſubſtance. Formation of bones.

4th. From the umbilical cord, which is thick and firm. Umbilical cord.

5th. From other circumſtances, oppoſite to thoſe in that which was imperfect, ſuch as that he cries, moves his limbs, opens his eyes, ſucks Other circumſtances

at

at the breaſt, is not always aſleep, can bear cold, has a white ſkin, can evacuate urine and the fæces, has long nails, and his head covered with hair.

Monſters what.

That which relates to the conformation of a child, after it is brought into the world, is diſtinguiſhed into monſtrous, and not monſtrous: the former including all deviations from the ordinary figure of man. Monſters are again divided into perfect and imperfect.

Perfect.

A perfect monſter is that which abſolutely differs in all its parts, from the human appearance, as when it reſembles any brute animals, as a

Imperfect.

dog, an ape, &c. An imperfect monſter is where only a partial alteration is made in its figure; and this may again differ, according as this partial alteration is made in the head, or other parts; and this as it may be born without a head, or with the head of a beaſt, &c. Where a monſter differs from a complete child, in other parts beſides

beſides the head, it is diſtinguiſhed into two ſorts, as any parts in general are affected, or as more particularly the change is wrought in the genitals only, and then it is called an hermaphrodite, which is likewiſe perfect or imperfect. Hermaphrodite.

In an enquiry into the nature of monſters in general, three objects of conſideration preſent themſelves. 1ſt. What is the cauſe of Monſters? 2d. Whether they are poſſeſſed of life? 3d. Whether a perfect monſter can be conſidered as a human being?

1ſt. The cauſe of monſters is various, as depending on ſuch changes in the conſtitution of the mother, as can hardly be accounted for. Cauſe of Monſters.

Whatever view we take of the theory of generation, whether a germen be formed in the ovarium of the female, which is only impregnated by the ſemen of the male, or whether the homunculus is contained in that ſemen, Theory of generation.

and the female affords a nidus for its formation; ſtill we ſee a ſtrong reſemblance to both parents in their offspring: and accidents, or other cauſes, contribute to make an entire alteration in the form of the fœtus, and produce monſters. We will not ſuppoſe unnatural connections, or that any impregnation can ariſe from that ſource; but imagination has a great power over the body of a female, eſpecially during geſtation; and the fluid in which the fœtus ſwims, or the womb itſelf may be diſordered, ſo as to occaſion great changes. Neither need we have recourſe to the theory of the ingenious Buffon to explain how theſe are brought about; or ſuppoſe that every part of the human body has a repreſentation in the fecundating quality of both parents, to form its conſtruction. The firſt rudiments or germen of the human body is not a human creature, if it be even a living

a living one ; it is a foundation only upon which the human ſuperſtructure is raiſed. This is evident to anatomical obſervation. Were a child to be born of the ſhape which it preſents in the firſt ſtages of pregnancy, it would be a monſter indeed, as great as any which was ever brought to light. How eaſy then is it for diſorder to prevent the exertion of that plaſtic force, which is neceſſary to form a complete animal.

Whether monſters can live.

2d. Monſters may live, but it depends on what parts are affected, how long life ſhall be continued to them. Where the monſtrous parts are confined to the extremities, or even to thoſe places which diſtinguiſh hermaphrodites, we find from experience, that the vital powers are ſtrong and vigorous ; and were it not that ſuch beings often fly from ſociety, lead ſedantary lives, and are deprived of ſome wholeſome exerciſes to the hu-

man conſtitution, life might be enjoyed by them, and to as great an extent as by any other perſons.

Are there perfect monſters?

3d. With regard to perfect monſters, moſt of the authorities which aſſert that any thing of that kind can exiſt, ſeem to be of no credit. But ſhould any ever appear, we ſhould conſider that it is not form or ſhape, but reaſon and intelligence, which diſtinguiſh human creatures from brute animals.

Hermaphrodites what.

We are next to conſider the nature of hermaphrodites; and as theſe are living beings, and ſometimes capable of all the functions of ſociety, ſuch diſtinctions ought to be made relating to them, as will place their ſituation in the moſt proper light, and the moſt favourable to their happineſs. They are great objects of our pity and complacency, for they are not only deprived of the common pleaſures of mankind, but are ſubject to diſorders which

which are painful, uncomfortable, and inconvenient. A perfect hermaphrodite or a being partaking of the diſtinguiſhing marks of both ſexes, with a power of enjoyment from each, is not believed by any one ever to have exiſted. Imperfect hermaphrodites, or monſters whoſe organs of generation are affected, are frequently preſented to us. They may be divided, according to the ſexes, into what are called androgynus, and androgyna. The firſt is the male, who has in general his own organs tolerably perfect, but has ſome diviſion in the fleſh above, below, on or in the ſcrotum, which puts on the appearance of the female pudendum. The penis likewiſe may be ſo obliterated, as to give no external appearance of the male, but the beard, and the conſtitution of his body, confirm him to be of that ſex. The androgyna is a woman, who has the parts of generation nearly

Perfect.

Imperfect.

Androgynus.

Androgyna

like another, but at the ſame time the clitoris grows to a great ſize, and gives the form of the male penis. This is a very inconvenient diſorder, as ſhe is ſometimes deprived of the pleaſures peculiar to her ſex, and ſuffers much from diſorders of the part. From her breaſts, and the deficiency of beard however, ſhe is diſtinguiſhed from the male; though it frequently and unfortunately happens, that ſuch women are more ſubject than others to robuſt and maſculine conſtitutions. It is evident that the ſexes here are as completely marked as in other perſons, and to all legal intents and purpoſes, they are man and woman.

Some important enquiries may ariſe upon this ſubject. As 1ſt. How far they are to be conſidered as impotent. This is, I believe, generally the caſe, but not always, and muſt depend upon proof. 2d. Whether they ſhould be permitted to marry? This depends upon

Hermaphrodites, how far impotent.

Should theymarry?

upon the former, but muſt, I ſhould think, be left to their own choice. 3d. Whether change of the ſexes might be allowed? This is certainly contradicted in the terms, and will admit of no diſpute.

May they change ſex?

With regard to the ſtate of life of a child, the following queſtion requires to be decided: At what time may a fœtus be ſuppoſed to begin to live? To anſwer this we muſt conſider, that conception is made in the ovarium of a female after coition with a male, when the ſubtile aura of the ſemen hath ſo far penetrated into the germen, which may be ſuppoſed to contain the outline of the future man, as to produce a turgeſcence and motion of its circulating humours. At this time it may be ſaid, that life begins, i. e. immediately after conception. Hence thoſe ſeem to err, 1ſt. who would perſuade us, that the fœtus acquires life when it is ſo particularly active,

When does a fœtus begin to live?

What is conception?

that the mother becomes ſenſible of its motions. 2d. Thoſe who think that life does not begin till the ſeventh or fourteenth day, or even till a month after conception. And 3d. Thoſe who ſuppoſe that a fœtus, as long as it continues in the womb, where it does not breathe, cannot be called a living animal. The whole depends on our ideas of life and animation, and the act of generation to create it. If generation be the cauſe of animating the rudiments of the future being, and if that animation be conſtrued to be underſtood by what is meant by life, then it muſt certainly begin immediately after conception, and nothing but the arbitrary forms of human inſtitutions can make it otherwiſe.

Seat of the ſoul.

On this occaſion we may enquire, what part of the human body is the ſeat of animation, or the ſoul? To which we anſwer, that evidently it reſides

ſides moſt conſpicuouſly in the brain, becauſe that ſubſtance being hurt, all the faculties of the ſoul become diſordered; and becauſe all the nerves of the body, which are the great inſtruments of action, are derived from it as a fountain. But it cannot be ſuppoſed that the whole of the brain is the immediate ſeat of the ſoul; it is probably confined to what is called the ſenſorium commune, or a ſmall part from whence the nerves, deſtined to ſenſe and voluntary motions, draw their origin; as they do likewiſe from an appendix to it, called the medulla oblongata.

What children have the power of life.

The next thing to be conſidered is, what kind of children, when born into the world, are to be deemed endued with life, or have a proſpect of living; for a fœtus cannot live out of the womb of its mother?

No abortion.

1ſt. Then, no abortion can be ſaid to be endued with life, for if there be

be ſome ſigns of life when it is brought into the world, it cannot continue to live, for it can neither take the aliment which is neceſſary to its ſuſtenance, nor if it could take it, can it change ſuch groſs food into its tender nature. Some authors have aſſerted, that children of five and ſix months have lived, but this is probably a miſtake, it being generally agreed, that infants ſo young cannot ſuſtain the inclemencies to which they muſt be ſubject.

Children of ſeven months.

2d. Children of ſeven months, or one hundred and eighty-two days after marriage, may live, though generally they are puny, and continue but a ſhort time on earth.

Children above ſeven months.

3d. All children above ſeven months are ſuppoſed to be endued with vital principles, and of conſequence are allowed the privilege of life.

The next ſubject of conſideration, is that of twins, ſuppoſitious births, and ſuperfœtation.

The

The right of primogeniture muſt be determined in natural births, by that which was firſt born into the world, and which muſt be decided by the by-ſtanders. If the delivery, however, be made by a paſſage effected by art, the choice depending on the will of the ſurgeon, no proper determination can poſſibly be made. Twins how conſidered.

In the affair of ſuppoſitious births, two queſtions occur, according as the birth is performed or not. In the former caſe, a phyſician may judge, 1ſt. From thoſe ſigns in the mother, which diſtinguiſh her having been delivered of a child. 2d. From thoſe ſigns which refer to her incapacity of conception. 3d. From ſigns of impotency in the father. 4th. From the umbilical cord in the child not appearing as of one juſt delivered. Some perſons look upon the diſſimilitude to the parents to be a ſign, but this muſt be very fallacious. Where the ſup- Suppoſitious births. Signs to judge by.

ſuppoſitious birth depends on the preſent ſtate of pregnancy, either the proper ſigns muſt be examined, or we muſt wait the event, ſhould thoſe ſigns deceive us.

Superfœtation. The impregnation of a woman already pregnant, is called a ſuperfœtation. This is either true or falſe; the former is when it happens in the womb itſelf; the latter when one fœtus is depoſited in the womb, the other in the ovarium, the fallopian tube, or the cavity of the abdomen.

Requiſites. The following requiſites are neceſſary to a ſuperfœtation. 1ſt. The pregnant woman ought to bear two children, each of a diſtinct age. 2d. The delivery of theſe children ſhould be at different times, at a conſiderable diſtance from each other. 3d. The woman muſt be pregnant, and a nurſe at the ſame time.

There have been many doubts about the reality of this ſuperfœtation, but

but there is no diſputing of facts, for which ſee Gravel on Superfœtation, Eiſenman's Anatomical Tables, and the Leipſic Memoirs, 1725.

How this ſuperfœtation is accompliſhed, is a matter of enquiry, and depends in a great meaſure on the conſtitution, or rather the formation of the womb of the mother.

Legitimacy

The laſt thing to be conſidered under this head of parturition, is the legitimacy or illegality of births; and this is divided into the time when a child is born after conception, and the conformation of its body. With reſpect to time, phyſically conſidered, (for laws may be as arbitrary as they pleaſe in this reſpect) all abortions, too early births, children of nine months, and thoſe who are late born, even to ten months, may be conſidered as legitimate in old marriages. Illegitimate with reſpect to the time of birth, are all perfect and mature children,

Divided from time.

dren, who are born in the ſixth or ſeventh month after the celebration of marriage; and all late births, when extended to the eleventh, twelfth, or thirteenth month, eſpecially if the huſband died of a chronic or lingering diſeaſe.

Cauſes of delay in delivery.

There are many cauſes alledged to occaſion a delay or prolongation of delivery, ſuch as great care and anxiety, ſome ſevere diſeaſes, as violent hœmorrhages, a phthiſical diſpoſition, &c. but theſe one ſhould imagine would rather haſten than retard ſuch a circumſtance. Experience is the only guide we can follow in ſuch caſes, and, for the ſake of humanity, the longeſt time that can be fairly proved ſhould be the ſtandard to which we ſhould refer.

Legitimacy from form.

With reſpect to the conformation of the body, all children may be conſidered legitimate, who are born at or after ſeven months; but all abortions

are

are illegitimate. Monſters likewiſe are not to be excluded for any trifling alterations; but where all appearances of human nature are obliterated, it would be wrong to take advantage of ſuch a birth.

CHAP.

CHAP. III.

ON DIVORCES.

Grounds of divorce.

IT is generally allowed, that various diſorders may conſtitute natural grounds for a divorce between two married perſons; and notwithſtanding the laws of particular countries are generally founded on local cuſtoms, and do not always refer to the natural reaſons, yet, as no other concern the medical perſon, and as they are proper to be known, no further apology is neceſſary for their inſertion in this place.

Defects in Conſtitution.

Thoſe diſorders, or rather as they may be called defects of the human conſtitution, which ſeem to conſtitute the natural reaſons for a divorce, are ſuch as are an abſolute impediment to the procreation of children. They

They are of two kinds, according as they have for their ſubject the organs of generation or not. The former may be divided into impotence in men, and ſterility in women, which is either abſolute or *continual*, or ſuch as eludes all human art to remove.

Abſolute impotence in men takes place, Impotence.

1ſt. When they are eunuchs, or are deprived of both teſticles, which being receptacles of the ſemen, without them no generation can be performed. Eunuchs.

2d. When they are ſpadones, or ſuch as have the nerves or muſcles leading to the parts of generation bruiſed, ſo as to deprive them of all perception of the venereal appetite. Spadones.

3d. When the penis is too ſhort, being amputated for diſeaſe. Short penis

4th. When the penis is perforated in ſuch a manner, that the ſemen cannot be thrown out with ſufficient force. Penis perforated.

This rule is to be admitted, with ſome limitation, as the theory of generation is not ſufficiently eſtabliſhed to determine with accuracy this point.

Schirrous teſticles.

5th. When both teſticles are become ſchirrous, ſo as not to be capable of a cure.

Semen watry.

6th. When the ſemen is too watry, and will not admit of amendment. This too being a diſeaſe that admits of a cure, ſhould not determine abſolutely.

Penis thick.

7th. When the penis is too thick. This is likewiſe only relative.

Phymoſis.

8th. When the preputium is ſo conſtructed or faſtened to the glans penis, as not to admit of relief by a ſurgical operation. This diſeaſe is called capiſtration.

Schirrous veſiculæ ſeminales.

9th. When the veſiculæ ſeminales are become ſchirrous.

Diſeaſes grounds for divorce.

Thoſe diſorders, which are an impediment to the procreation of children, and which are not derived from the

the organs of generation, are ſuch as are of a highly contagious nature, or create an unconquerable averſion; ſuch as the lues venerea, melancholy, epilepſy, ſcurvy, ſcrophula, and a highly fœtid and diſagreeable breath. But it is to be hoped, for the honour of phyſic, and the benefit of humanity, that ſuch diſeaſes will meet with their proper cure: and indeed in all the caſes here mentioned, as the happineſs of individuals is ſo much concerned, and the public good on the other hand ſo much to be ſtudied, it is neceſſary that the obſervations be made with the greateſt care, and that the matureſt judgment of the phyſician be exerciſed with diſcretion.

Abſolute ſterility in a woman, ſo as to unfit her for matrimonial duties, are, Sterility.

1ſt. When the parts deſtined to generation are ſo imperforate as not to Parts imperforate.

admit of any relief without incurring great danger of life.

Fluor albus

2d. When ſhe is ſo grievouſly afflicted with the fluor albus, (vulgarly called the whites) as not to admit of any cure. Much care and attention are here however requiſite, and many medicines are to be tried before an abſolute judgment be made: nay, I ſhould think much experience muſt be admitted, and the huſband likewiſe be examined carefully with regard to his own abilities.

Vagina ſtrait.

3d. When the vagina is too ſtrait and narrow, upon account of ſchirrous tumours, or of any other kind which it is impoſſible to remove.

Orifice of womb cloſed.

4th. When the orifice into the uterus is entirely cloſed. This will be known not only by the touch, but by the retention of the menſtrual flux, which in time will force a paſſage, or from the dreadful ſymptoms it induces, require the hand of the ſurgeon

to

to procure it. This can hardly be called therefore an abſolute impediment.

5th. When there is an ulcer in the uterus, or the paſſages to it, which ſometimes is of ſo corroding a nature, as to penetrate the rectum and bladder of urine. There are many other cauſes of ſterility, which are derived from injuries or obſtructions in the internal parts deſtined to generation. But here all is darkneſs, and it would be cruel to determine by any other, than what are quite evident upon inſpection and accurate examination of the parts.

Ulcer of womb.

Internal parts diſeaſed.

Before this ſubject be diſmiſſed, it may be neceſſary to mention ſome other circumſtances, which, although they may not render either ſex abſolutely impotent, yet may be conſidered as defects, and ſome hindrance to the generative powers, but by no means conſtitute reaſons for a divorce : ig-

Defects in generation.

norant perſons may conſider them as ſuch ; this error is therefore to be guarded againſt.

Thoſe which occur in the male ſex are, where they are,

Monorchides. 1ſt. Monorchides, or ſuch as have only one teſticle. Theſe are by no means incapacitated, as the ſecretion only is made in that organ from which it is carried to the veſiculæ ſeminales, and there depoſited for uſe. So that one teſticle is as efficacious as two, and the ſecretion is always proportioned to the evacuation.

Triorchides. 2d. Triorchides, or thoſe who have three teſticles.

Spadones. 3d. Spadones, where one teſticle only is bruiſed.

Androgyni. 4th. Androgyni, for which ſee the account of hermaphrodites in the laſt chapter.

Circumciſion. 5th. Thoſe who are circumciſed. This is an advantage rather than a hindrance.

6th.

FH
MVSEVM
BRITANNICVM

6th. Thoſe who have remedied this defect by art. Paraphimoſis cured

7th. Chryſporchides, or thoſe whoſe teſticles do not lie in the ſcrotum, but in the abdomen, or in the groin. Chryſporchides.

8th. Thoſe who labour under a phimoſis, which is a diſorder where the præputium is brought over the glans penis, and cannot be retracted but by art. Phymoſis.

9th. Thoſe who have the præputium buttoned over the glans. Præputium buttoned.

10th. Thoſe whoſe penis is longer or ſhorter than natural, unleſs in very great extremes. Long and ſhort penis.

Women cannot be ſaid to be incapacitated totally. Defects in women.

1ſt. When they have a falling down of the womb, for this may be only temporary, and may be remedied by art. Prolapſus.

2d. When they have too large a clitoris, or nymphæ. Large clitoris.

Androgynæ

3d. When they are androgynæ, or hermaphrodites from other cauſes.

Parts large.

4th. When they have the pudendum too large and wide.

Flow of menſes.

5th. When they have an irregular flow of the menſes.

Rupture of perinæum.

6th. When they have ſuffered in delivery a rupture of the *perinæum*, or the ſpace between the fundament and pudendum.

CHAP.

CHAP. IV.

ON RAPES.

IN the conſideration of rapes, three objects of attention preſent themſelves.

Objects of attention.

1ſt. Whether a rape, ſtrictly ſo called, be poſſible?

2d. Whether a woman, upon a rape being committed, can become pregnant?

3d. What are the ſigns of a rape being perpetrated?

Is a rape poſſible?

1ſt. In anſwer to the firſt queſtion, whether a rape be poſſible, meaning upon a grown perſon, it may be neceſſary to divide it into two parts, as it is diſtinguiſhed into the attempt and the conſummation of a rape. The attempt, under which is to be underſtood a great force exerciſed over a woman to violate her chaſtity, but

Attempt.

Conſummation.

where a compleat coition is prevented, may be poſſible. But the conſummation of a rape, by which is meant a compleat, full, and entire coition, which is made without any conſent or permiſſion of the woman, ſeems to be impoſſible, unleſs ſome very extraordinary circumſtances occur: for a woman always poſſeſſes ſufficient power, by drawing back her limbs, and by the force of her hands, to prevent the inſertion of the penis into her body, whilſt ſhe can keep her reſolution entire. Beſides, it is evident that a leſſer reſiſtance can prevail againſt the motion of any body which acts againſt the weight; and that is the caſe here: the penis, in attempting an immiſſion into the vagina, moves a body againſt the weight.

Does pregnancy follow a rape?

2d. With reſpect to the next queſtion, whether a woman, upon whom a rape hath been committed, can become pregnant? It may be neceſſary

ceſſary to enquire how far her luſt was excited, or if ſhe experienced any enjoyment. For without an excitation of luſt, or the enjoyment of pleaſure in the venereal act, no conception can probably take place. So that if an abſolute rape were to be perpetrated, it is not likely ſhe would become pregnant.

3d. The ſigns of a rape having been perpetrated, or rather attempted, are taken from the evacuation of blood from the injured parts, and great ſwelling and inflammation. But as theſe may be induced by other means, or are not inconſiſtent with conſent having been obtained, they can only be conſidered as corroborating, but not as certain proofs. Signs of rape.

As rapes however are ſometimes committed upon young children, who may have the ſigns of their virginity obliterated by them, it may be neceſſary to conſider what are thoſe ſigns, and

and what are the marks of their being deſtroyed. The ſigns of virginity then, may be allowed to be the following.

Signs of virginity.

1ſt. The lips of the pudendum are more prominent, and cloſe together.

2d. The nymphæ are ſmall, endued with a light roſe colour, and do not extend out of their place.

3d. The prepuce of the clitoris is ſmall, and does not cover the glans.

4. The orifice of the urethra, or urinary paſſage, is entirely covered.

5th. The wrinkles of the vagina are conſiderable, and raiſed above the ſurface.

6th. A bridle or frœnulum appears before the lips of the pudendum.

7th. The hymen is likewiſe preſent, by which is meant a thin tenſe membrane, ſituated at the entrance into the vagina, being ſometimes of an oval figure, ſometimes circular, and

ſome-

ſometimes ſemilunar, and ſhutting up greateſt part of the paſſage. This hymen hath been eſteemed a certain mark of virginity, when other circumſtances concur to give it authority. It is not, however, by any means abſolute, even in the youngeſt ſubjects; for it may be ſo concealed in the back of the vagina, as not to be perceptible at firſt ſight, or it may be deſtroyed or obliterated by a variety of cauſes, beſides a connection with a male. A freſh rupture of it, however, may be perceived, and ſome remains of it will continue evident for ſome time.

Marks of having uſed venery.

The marks by which it is moſt probable that a female hath accuſtomed herſelf to venereal habits, and of conſequence is leſs to be believed upon a depoſition for a rape, are the following.

1ſt. The lips of the pudendum are flaccid and diſtended more than in a maiden.

2d. The

2d. The clitoris is enlarged, and hath a prepuce which covers the glans ariſing from conſtant friction, and is produced to defend it from injuries, in proportion as it is expoſed to them.

3d. The nymphæ are likewiſe enlarged, and are of a lighter and more obſcure colour.

4th. The orifice into the urinary paſſage is more open and expoſed. This is owing to the flaccidity of the labiæ.

5th. The hymen is wanting, as may naturally be ſuppoſed, but it is not to ſtand as a teſt by itſelf, where the other circumſtances do not occur.

6th. Some ſmall excreſcences ariſe in the ſhape of the berries of the myrtle (called from thence carunculæ myrtiformes) at the entrance into the vagina.

7th. The vagina is enlarged and ſpacious, and this even where there has been no parturition.

8th. The

8th. The wrinkles are leſs prominent, and in length of time are quite obliterated.

9th. The orifice of the uterus approaches nearer than before to the orifice of the vagina. This, however, muſt be entirely relative, as the extent of the vagina muſt differ in every ſubject; and beſides, it preſumes upon an acquaintance with the perſon previous to the habit ſhe is engaged in, which is not eaſily to be acquired.

CHAP.

CHAP. V.

OF THE MURDER OF INFANTS.

THIS kind of homicide relates to the youngeſt and moſt helpleſs part of the human ſpecies, and is confined to them in three ſtates of their exiſtence : juſt before they are born, at the time of delivery, and immediately or ſoon after they are brought into the world. The two laſt may be included together, and conſtitute child murder, ſtrictly ſo called, and the other the murder of a child in its abortive ſtate, or the premature delivery of it ſo as to procure its death.

Confined to what ages.

State of the mother.

We ſhall firſt conſider the ſtate of the mother, after ſhe has been delivered of a child, as a leading fact upon which much depends with regard to the deſtruction either of infants or abor-

abortions, and then the particular nature of each of theſe homicides.

The ſigns that a woman hath been delivered of a child, are of two kinds, as this circumſtance is recent, or has happened for ſome time back. The ſigns of the former are, Signs of delivery. Recent.

1ſt. An extraordinary ſwelling of the external parts of generation.

2d. A preternatural diſtenſion of the vagina.

3d. A flow of the lochia, which is a diſcharge that differs from the common menſtrual flux, in being of a paler colour, and having a ſouriſh diſagreeable ſmell.

4th. The orifice into the uterus is ſoft and open, as if a late diſcharge had been made from it; the womb itſelf too not having properly collapſed and taken its natural ſhape.

5th. There is a roughneſs and flaccidity of the abdomen, which is ſometimes covered likewiſe with wrinkles.

6th. The breaſts are ſwelled to a larger ſize than common, and are hard and troubleſome to the touch, ſometimes loaded with excreſcences that feel like ſchirri.

7th. Milk is found in the breaſts, which, when curdled, forms the knots above-mentioned, and may be extracted from them by preſſure, or by ſuction.

8th. The nipples become thick and ſtrong, and the diſk round them is much widened.

Former. The ſigns that a woman hath formerly been delivered of a child, are the following.

1ſt. All the ſigns of her having loſt her virginity in the laſt chapter.

2d. The orifice of the womb has not its uſual conic figure, and is more open than in a maiden.

3d. The lips of the orifice of the womb are unequal.

4th.

4th. There is a roughneſs of the abdomen, which is likewiſe more expanded, and penſile or hanging down.

5th. There are ſmall white and ſhining lines running on the abdomen.

6th. The frænum of the labiæ pudendi is obliterated.

7th. The breaſts are more flaccid and pendulous.

8th. The lines on the breaſts are white and ſplendid.

9th. The colour of the diſk is brown.

10th. The nipples are prominent.

11th. There is a prominence of the inner coat of the womb.

12th. There is ſometimes an inverſion of this body.

Marks of abortion.

The marks of abortion depend on the length of the pregnancy, and muſt be referred to the judgment of the phyſician, &c. In general they are only thoſe of loſt virginity. Vide laſt chapter.

In order to explain thoſe diſtinctions by which we are to know that an infant who has been found dead and expoſed, was murdered by any inhuman hands or not, we ſhould divide them,

Diviſion of the ſigns of murder.

I. Into thoſe ſigns by which we know that the child might be born alive, and afterwards be deſtroyed.

II. Thoſe more evident marks, by which we aſcertain that it was brought into the world dead.

III. Thoſe which accurately point out, that force and violence were exerciſed to deprive it of exiſtence.

IV. Thoſe more particular diſtinctions which are to be made upon a thorough inſpection and diſſection of the dead body.

Signs that a child was born alive.

I. We know that a child has been born alive, when we find that it has exerciſed any of the vital actions, by which is meant, not thoſe ſimilar actions by which life is ſupported when

when the fætus remains in the womb, but thoſe real actions which are in force after the child is brought into the world. Theſe are the circulation of the blood, and reſpiration, ſuch as is enjoyed by animals after their birth.

Signs of circulation of blood.

The following may be eſteemed proofs that a child hath enjoyed the circulation of its blood after it is born, and thus may be ſaid to be born alive.

1ſt. The mother, during the whole ſtate of her pregnancy, muſt have enjoyed a good ſtate of health, and have perceived the motions of the infant to the time of her delivery.

2d. The child, when born, muſt be of a proper length and weight. Vide chap. ii. p. 15.

3d. The blood veſſels of the child muſt not be replete with blood.

4th. There muſt be a ſettlement of blood in divers parts of the external ſurface of the ſkin.

5th. The body of the child muſt not be rough nor flaccid.

6th. The umbilical cord ſhould be full of juice, and of a white colour.

7th. The placenta, if it be to be found, ſhould be turgid, and its veſſels full of blood.

8th. In places that may be preſſed in different parts of the body, the blood ought to ſtagnate, and become coagulated.

9th. A froth ſhould appear upon the mouth of the infant, and ſtick about its lips.

10th. There ſhould be every appearance of a natural delivery.

It ſhould be remarked here, that theſe ſigns ſhould be taken collectively; ſcarcely any of them will avail when taken ſeparate from each other.

Signs of reſpiration.

The ſigns that an infant has breathed after it is brought into the world, are,

1ſt.

1ſt. The act of vociferation after delivery, if poſitive proof of ſuch a circumſtance can be obtained.

2d. The lungs being endued with a colour approaching to a white, being of leſs ſpecific weight than others, when the child never breathed thro' them, and being put into water, having a diſpoſition to ſwim in it. This will be conſidered more fully.

3d. The lungs are more expanded than in dead ſubjects, and previous to delivery adhere to or rather fill up the cavity of the thorax.

II. The ſigns by which we can in ſome meaſure determine that an infant was brought into the world dead, are to be derived from the following circumſtances, and which appear to be of the utmoſt note. Signs of an infant being dead

1ſt. When the mother has been for ſome time afflicted during the time of her pregnancy, with various ſevere diſorders.

2d. When ſhe has not perceived for ſome time the motions of the infant in her womb.

3d. When upon a diſſection of the head of the infant, the brain appears fluid like water, and has not its uſual ſubſtance.

4th. When the heart and other blood-veſſels are filled with thick and coagulated blood.

5th. When the body of the infant has its fleſh collapſed and contracted, its ſkin ſoft and flabby, and its whole appearance of a red or ſcarlet colour.

6th. When compreſſions on the ſurface are attended with no *ecchymoſes*, or ſtagnations of blood.

7th. When the blood is of a putrid nature, whilſt it continues in the veſſels.

8th. When there are evident ſigns of a putrefaction having taken place, whilſt the child was in the womb, ſuch as a ſeparation of the cuticle from the inner

neat ſurface of the ſkin; the umbilical cord being rotten, wrinkled, of a yellow colour, and as if melting away; a ſwelling of the abdomen, and a ſoft tumefaction of the whole body.

9th. When the umbilical cord is not only rotten, but devoid of humours.

10th. When the bones of the ſkull of the infant are ſofter and more diſjoined than in one born alive.

11th. When other internal parts beſides the brain are found corrupted and decayed.

12th. When the *placenta*, or afterbirth, at the time of delivery, or ſoon after, is in a ſtate of corruption.

13th. When there is a defect of the excrement in the large inteſtines, and of urine in the bladder deſtined to its uſe.

14th. When parturition was exceedingly laborious.

15th.

15th. When the lungs are more denſe than in a live ſubject, have a red colour, ſubſide in water when they are thrown into it, and are ſo collapſed as not to fill up the cavity of the thorax.

16th. When there is an unequal conformation of all the organs deſtined to their ſeveral functions, with reſpect to length and thickneſs.

17th. When the little body of the child, if perceived ſoon after delivery, is not found warm to the feeling.

18th. When the blood flows from the mother in a ſuperabundant quantity, both before and after delivery.

19th. When the mother, during her pregnant ſtate, has been excited to a high degree of anger, or impreſſed with extraordinary fears.

20th. When ſhe has ſuffered a great injury during that ſtate, eſpecially in the abdomen.

21ſt. When at the time of delivery a ſtrong mephitic ſmell may be per-

perceived to iſſue from the external parts of generation.

22d. When there is a ſubſidence of the ſutures upon the top of the head in the child, without any marks of violent depreſſion.

23d. When the meconium, a kind of fæces, flows from the child at the time of delivery.

Swimming of lungs examined.

A great handle hath been made of the ſwimming, or ſubſidence of the lungs. When other circumſtances are taken into conſideration, it may be a corroborating proof, but can by no means be abſolute of itſelf; for the lungs may ſwim from putrefaction, where a child is born dead, or from inflation by a blow-pipe, or other means. On the other hand, the lungs may ſubſide in a child that is born alive: for a child may live, or have its circulation perfect, ſome time before it begins to breathe.

Signs of violence to procure death.

III. We are to conſider how to form a judgment, concerning any violence that may have been uſed to procure the death of a child, and this we derive from the following circumſtances.

From wounds.

1ſt. When at the time of inſpection, marks of certain injuries, ſuch as might have been inflicted upon an adult, as fractures or wounds, are evident to the ſenſes.

From ſuffocation.

2d. When there are evident marks of ſuffocation, or ſtrangulation, ſuch as a remarkable compreſſion of the *thorax* or cheſt; the *aſpera arteria*, or wind pipe, being filled with ſerum or mucus; a redneſs or lividity of the countenance; the tongue ſwelling and prominent; a red or livid circular line about the neck; the cavities of the mouth and noſe full of extraneous matter; a falling in of the fleſh about the *ſcrobiculum cordis*, or pit of the ſtomach; the lungs livid, filled with blood, and heavier than uſual; the

vapours

vapours of ſulphur burnt extending to the lungs; the cavities of the heart, as the right auricle and ventricle, being filled and expanded with blood; the jugular veins, and thoſe about the head, being alſo diſtended with blood; a froth about the mouth; the bladder empty of urine; the child being found in places where he is liable to be deſtroyed by dirt or water, as in ditches or lakes; and laſtly, its being oppreſſed ſoon after delivery by bed-cloaths, or other coverings which might deprive it of life.

Luxation of neck.

3d. When there are evident marks of the luxation of the neck, taken not only from the flaccidity of the head and neck, but from depreſſions about the parts, which are wide and deep.

Injuries of the ſkull.

4th. When there are evident marks of injuries to the ſkull, as great depreſſions and blots near to the ſutures, which ariſe from extravaſations of blood and ſerum, and appear either under the

the ſkin, or in the hemiſphere of the brain, or in its venticles, or in the baſe of the ſkull.

Umbilical cord not tied.

5th. When the umbilical cord does not appear to have been tied, or is entirely torn off from the body. It ſhould be obſerved, that the neglect of tying the umbilical cord is not always the immediate cauſe of death to an infant, but only when, from ſuch defect, a mortal hœmorrhage ariſes, and which may be known,

When the cauſe of death.

1ſt. When the whole habit of the body is quite pallid.

2d. When the great blood veſſels, and the cavities of the brain, are empty of blood.

3d. When there is a rupture of the cord in delivery, and the mother has ſuffered much hœmorrhage both before and after that event.

Circumſtances on inſpection.

IV. It is neceſſary, perhaps, in many caſes where a ſuſpicion of murder is great, but the facts are not ſo evident,

evident, to exerciſe the judgment as well as the obſervation of the perſon employed to give a depoſition. And here are ſome rules neceſſary to be obſerved to execute his intention in a maſterly, judicious, and accurate manner. In the firſt place, he ſhould conſider, whether the body be in a ſtate of putrefaction or not, and whether that putrefaction is in ſuch a degree as to preclude all obſervation. If that be not the caſe, perhaps an examination may be made upon the bones of the head, or other parts, ſo far as to aſcertain,

Putrefaction.

1ſt. Whether the fœtus be of mature growth, and this may be known from the ſize as well as the conformation of them.

2d. Whether ſuch violences have been uſed as to injure theſe parts, as by fractures, &c.

If a degree of putrefaction has not taken place, ſo far as to preclude our obſer-

obſervation, the rules may be divided into thoſe that relate to the inſpection, and thoſe that relate to the diſſection of the body.

When a proper inſpection is made, we ſhould examine,

Clothes. 1ſt. Whether the clothes in which the child is wrapped up be tinged with blood, or whether there be any blood upon the external ſurface of the ſkin.

Sex and growth. 2d. Of what ſex the child is, and whether it be come to mature growth.

Superficies of the body. 3d. The whole ſuperficies of the body is to be examined from head to foot, to ſee whether there are any *ecchymoſes*, or ſtagnations of blood; livid ſpots, or blots of various colours; whether the ſkin itſelf be grown livid, with or without any ſigns of violence, or other injuries, ſuch as punctures in the head or neck, luxations, and ſubſidence of the ſutures, with or without any violent depreſſion.

4th.

4th. The heat of the face, in particular, and of the whole body, are to be attended to. And here we muſt guard againſt deception, for a dead fœtus may partake in ſome meaſure of the heat of the mother; ſo that if a dead fœtus were to be examined immediately after delivery, and a child born alive, ſome little time after death, they might both enjoy the ſame degree of heat. Other circumſtances then here muſt be taken into the account. Heat of the child.

5th. The cavities of the mouth and noſe are to be examined, to ſee whether any foreign matter is depoſited in them. This cannot be, unleſs the child had enjoyed life ſo far as to open theſe paſſages. We ſhould obſerve likewiſe, whether it has graſped any thing in its hands, as this is a certain proof of life. Cavities.

6th. We ſhould examine the umbilical cord, whether it adhere to the Umbilical cord.

placenta, if it be tied, or is broken or cut off, and what is its colour, and what its length.

Placenta. 7th. The *placenta*, or after-birth, likewiſe ſhould be examined, to ſee whether it adhere to the umbilical cord; whether it be dry or moiſt, and how far it may have become ſchirrous.

Appearances on diſſection. We are next to conſider, what is to be done upon a diſſection of the body, and this ought never to be omitted: and here the following rules ſhould be obſerved.

Principal cavities to be opened. 1ſt. All the three principal cavities of the body, the head, the *thorax* or cheſt, and the *abdomen* or belly, ſhould be opened, to diſcover any injuries that may have happened to the ſubſtances contained in them, and the great veſſels which run through them.

Lungs examined. 2d. The lungs ſhould be properly examined, and every enquiry made into their colour, connection, denſity,

denſity, ſubſtance, and ſpecific gravity ; and whether they may not be indurated in ſome places, and how far they exhibit ſigns of putrefaction.

3d. The *aſpera arteria*, or wind-pipe, ſhould be cut through, to diſcover how far it is filled with mucus or ſerum. The great veſſels, and the cavities of the heart likewiſe, ſhould be opened, not only to obſerve how far they are full or empty of blood, but that the colour and conſiſtence of that fluid may be aſcertained. Having made theſe obſervations, the lungs, with the heart, are to be cut out of the body. After this the heart is to be ſeparated from them, and the veſſels tied : they are then to be thrown into a large baſon of moderately warm water, and it is to be obſerved how far they ſink or ſwim in it. After this, each tube of the lungs is to be examined ſeparately, and the ſame obſervations to be made upon it. Wind-pipe.

Viſcera of abdomen.

4th. All the other viſcera, but particularly thoſe of the abdomen, are to be examined, but the great inteſtines eſpecially, to ſee whether they are full of meconium, and the bladder if it be exhauſted of urine.

We cannot help lamenting here, that although ſo much is required, ſo little is generally done in theſe caſes; and that an innocent life is often ſacrificed to hurry, to negligence, or ignorance; whilſt a wretch who is devoid of ſhame, eſcapes from puniſhment, for want of judgment, accuracy, and attention. And it is to be hoped that this little treatiſe will meet the attention of judges and lawyers in this particular circumſtance, which ſo often comes before them, to the ſhame and ſcandal of humanity; and that they will be enabled to correct the errors of coroners, or ignorant ſurgeons, who may have been miſled in the depoſitions they give in. It is a misfortune,

tune, that men of eminence in the phyſical line fly from bars of judicature, as places of trouble and examination. It may be neceſſary, therefore, to give the courts ſuch checks upon ignorance, as will ſerve to diſcover the truth.

The next thing to be conſidered before we finiſh this chapter, is with reſpect to abortions, or the deſtruction of thoſe unborn embryos which were never brought into the world: and indeed as ſuch beings might live, and become of uſe to mankind, and as they may be ſuppoſed from the time indeed of conception, to be living animated beings, there is no doubt but the deſtruction of them ought to be conſidered as a capital crime. It is neceſſary then, that we enquire whether any medicines can be given, or other means uſed, abſolutely to procure this effect; and indeed it is evident, I believe, from experience, that ſuch

Abortions.

No medicine can procure it.

things cannot act as efficient cauſes, without the aid of thoſe prediſpoſing cauſes, or natural habits of the body, which are neceſſary to concur with them. As attempts of this kind, however, ſhould not be paſſed off with impunity, and as the life of the mother, as well as the child, is endangered by ſuch exhibitions, if adviſed by any other, they ſhould be conſidered as highly culpable, and for this reaſon ſhould be made known.

Methods generally uſed.

The common methods made uſe of are the ſtronger vomits and purges, venæſection to a great degree, all that claſs of medicines called emmenagogues, and thoſe which have a tendency to promote ſalivation. External methods are, irritations of the mouth of the womb, ſtrong paſſions of the mind, painful diſorders, fevers, &c. The prediſpoſing cauſes muſt be, great fullneſs of the blood, irritability of the womb, a defect in the nutriment

of

of the fœtus, a womb that will not ſuffer itſelf to be diſtended beyond a certain degree, and a morbid diſpoſition of the placenta.

It is to be lamented here too, that whilſt this crime, which is practiſed generally by the moſt abandoned, eſcapes unpuniſhed, a poor deluded creature, in the caſe of infant murder, whoſe ſhame highly extenuates her guilt, ſhould ſuffer death, where nature had acted ſo forcibly as almoſt to overcome her fatal reſolutions, and had taken away all power to put in practice the ſubtle contrivances of art,

CHAP.

CHAP. VI.

ON HOMICIDE.

Nature of man.

THAT wonderful machine of which human nature is compoſed, which is directed and ordered by a contrivance unknown to the wiſeſt of men, and which gives birth to all our pleaſures and enjoyments, contains nothing in itſelf to perpetuate its own exiſtence. A very little derangement of its functions, or of its acting principles, will deprive it of life, and deſtroy all its powers of action. The moſt common methods by which men loſe their lives, are by diſeaſes which are generally, though impiouſly, attributed to the hand of God: for what we incur by our own vices and imprudence, what by the paſſions and evil diſpoſitions of others preying upon our ſpirits, and what by bad cuſtoms and habits, we muſt attribute more

How deprived of life.

By diſeaſe.

more of death to any other cauſe, than what is aſſigned. Where death is occaſioned in any other manner than by diſeaſe, it is called natural, where it ariſes from ſome accident, which ſhall immediately cauſe a diſſolution of our powers; or homicide where it is effected by the violent hand of another. In ſuch a caſe, the law juſtly retaliates upon the offender, where it is committed from anger and malice, and is not, as in the caſe of war, protected by the ſovereign influence of princes.

Natural cauſe.

Homicide.

Where it comes under the cognizance of a court of judicature, the greateſt circumſpection and attention are required, and the laws of all countries have appointed proper officers previous to any trial, and as ſoon as poſſible after the murder, to enquire into the cauſes and nature of it, how it was committed, and what appearances preſent themſelves upon inſpection.

Officers to enquire.

Directions how to examine.

In the examination which is made, (before a deciſion be pronounced) the following directions are neceſſary to be obſerved.

When to be made, and where.

I. The examination of the dead body ſhould be as ſoon as poſſible after death, in the day time, at a proper place, where a diſſection, if neceſſary, (and it is almoſt always neceſſary) may be performed, and not according to vulgar cuſtom, where it is found, let it be ever ſo improper, and likewiſe by proper inſtruments, ſuch as are generally uſed by ſurgeons in their diſſections, and not by coarſe and rude knives and ſciſſars, which may mangle and tear the body, but cannot aſcertain the cauſe of its death.

Accurate inſpection of found body.

II. Before a diſſection be propoſed, a very accurate inſpection ſhould be made upon the ſound body, in order to diſcover how far the death was occaſioned by ſuffocation from mineral vapours, the fermentation of new li-

quor

quor, the burning of charcoal, or the electric ſhock of lightning. In ſuch caſes, except the laſt, and then they do not ſeem to be the cauſe of the death, no marks are to be found.

III. Upon a further inſpection, it is to be examined 1ſt. into any deviations from the natural ſtate of the external ſuperficies of the body, as whether there are any ſpots which are derived from the blood's eſcaping into veſſels not fitted to convey it; ecchymoſes, which are ſtagnations ariſing under the ſkin, or pericranium of the head; or any other ſpots in the external ſurface; and of theſe we are to examine the ſituation, magnitude, figure, and number. We muſt examine likewiſe, under this head, the nature of any tumours which may appear, and whether they are owing to violence, or any other cauſe: their ſize and figure ſhould alſo be deſcribed. And laſtly, we ſhould enquire into the ſtate of putre-

Spots on the body.

Tumours.

Putrefaction. putrefaction of the body, which is known by the following particulars. 1ſt. Bladders filled with a yellow or browniſh liquor. 2d. The external cuticle ſeparated from the true ſkin. 3d. A lividity and blackneſs of the ſkin. 4th. A fœtor, or diſagreeable ſmell of the whole body. 5th. A conſiderable ſwelling of the carcaſe. 6th. A particular lividity and blackneſs in the ſcrotum of male ſubjects. 7th. A blackneſs of the nails.

Wounds, &c. 2d. Into any wounds which are conſpicuous, and remark whether they be over the whole body, or confined to a particular part; and here no probe or other inſtrument ſhould be inſerted, which may enlarge them, and alter their nature.

Blood or other humour flowing from carcaſe. 3d. Whether from the carcaſe in general, or from any wound or aperture, as the mouth, anus, &c. there be a flowing of blood, urine, or meconium.

4th.

4th. Into the habit of the body, whether it be fat or lean, or ſwelled from any cauſe. Habit of body.

IV. The directions to be attended under a diſſection are the following. Diſſection.

1ſt. The integuments of the body, and eſpecially of thoſe places which require examination, where any wounds preſent, are to be diſſected away, and the muſcles are to be cut through, in order to open a way to the parts where injury is ſuppoſed to be done. Integuments.

2d. All the chief cavities of the body, as the head, the cheſt, and the belly, are to be opened. Cavities.

3d. That cavity is to be penetrated firſt where the injury is ſuppoſed to reſide. Where injury received.

4th. The parts circumjacent to a wound are not to be diſſected before the progreſs of the injury is traced to its utmoſt extent. Parts circumjacent.

5th. Any bowel contained in the cavity, is to be examined according to Bowels.

its

its ſituation, connections, conſtitution, and any wounds which it may have received, in their length, breadth, and depth.

Foreign bodies. 6th. We ſhould enquire if the bowel opened contain any foreign bodies, either fluid or ſolid: if the former, their nature and quantity is to be determined; if the latter, their quality, number, quantity, figure, and ſituation.

Blood veſſels. 7th. All the great blood veſſels paſſing through a cavity, are to be examined whether they be entire or no, and whether they contain blood or not.

Nerves, &c. 8th. The great nerves likewiſe, as the *medulla ſpinalis*, or ſpinal marrow, &c. ſhould undergo an examination, and the thoracic duct and receptacle of the chyle, veſſels which carry the nutriment from the ſtomach, and from the external ſurface into the maſs of blood.

9th.

9th. Before the head be opened, it ſhould be diſcovered whether there are any wounds in the ſkull by fracture, fiſſure, intropreſſion, &c. and of ſuch the ſituation, ſize, depth, number, and figure, ſhould be marked. Head opened.

10th. When the head is opened, the ſkull ſhould be carefully taken off with a ſaw. Skull.

11th. When the brain is examined, regard muſt be had to its ſubſtance, to its veſſels, whether they be full or empty of blood; to the ſinuſſes of the dura mater, thoſe large receptacles of blood which lie under the ſkull; to the ventricles or cavities, to ſee whether any fluid be contained in them, and of what nature, and in what quantity; to the baſe of the ſkull, to diſcover if any foreign body lies upon it; and laſtly, to the thickneſs of the bones, whether it be ordinary or extraordinary. Brain.

12th.

Cheſt. 12th. When the cheſt is opened, the ſternum is to be ſeparated from the ribs with great care, leſt the arteries or veins lying near it, or in the cavity, be injured.

Ribs. 13th. If a wound ſhould be made in the cheſt, and which penetrates either ſide, then we ſhould not only determine the ribs between which the wound is made, but from whence we reckon.

Heart. 14th. When the heart is examined we ſhould take notice, whether polypous concretions occur in its cavities, or in the greater veſſels.

Rupture of bowels. 15th. When a rupture of any of the bowels is diſcovered upon diſſection, we ſhould carefully examine whether it be recent or whether it be gangrenous, or have the ſigns of putrefaction.

Contents of bowels of abdomen. 16th. When the bowels of the lower belly, which are large cavities, are ſubmitted to examination, we ſhould

ſhould enquire with the utmoſt care into their contents, and this not only by ſimple inſpection, but by the fire and chemical mixtures.

There are beſides theſe, ſome other circumſtances to be attended to, as the conſtitution of the dead perſon, the inſtrument by which his death was occaſioned, the ſymptoms under which he laboured, the means uſed to reſtore him, the time when aſſiſtance was called to him, his ſituation when wounded, his diet before and after, and laſtly, whether he was affected with drunkenneſs. Other circumſtances.

The different kinds of murder, or the different means by which it is committed, may be reduced to poiſons, wounds, bruiſes, drowning, and ſtrangulation. The two firſt ſeem to be the moſt common; the third is often rather a remote than a proximate cauſe, and the two others are chiefly diſcovered by the facts, rather than Different kinds of murder.

by any peculiar marks they leave on the body. But firſt of poiſons.

Of poiſons defined.

A poiſon may be defined any ſubſtance which, applied to the human body internally, is injurious to its preſervation, or procures its diſſolution by its own proper qualities. The

Ways by which they act.

ways by which poiſons get into the body, are by the mouth, noſe, lungs, and ſometimes the external ſurface of the ſkin, and theſe modes of action may be explained in the following manner.

Mode of action.

Health ſuppoſes a natural ſtate or conſtitution of the fluids and ſolids of the animal body. All poiſons then, muſt act in deſtroying this natural conſtitution of parts, and changing it into a preternatural one. There are various ways by which this is done; the principal are the following.

By acrids.

1ſt. By acrid things, which conſtringe and erode the ſolids, or ſometimes

times coagulate, ſometimes reſolve the fluids.

2d. When they poſſeſs a power of ſtupefying or deſtroying the powers of ſenſation and motion in the nerves, which are the great agents of the animal machine. Stupefyers.

3d. When they poſſeſs a ſharp and acute figure, which tears and lanci-nates the tender parts of the ſtomach and bowels. Figure ſharp.

4th. When they induce a power-ful ſuffocation. Suffocation

5th. When they act not only from acrimony, but from a power of thicken-ing the blood at the ſame time. Tenacity.

6th. When they have the power of thickening and of drying alſo the humours. Drying.

7th. When they act by ſome un-known power, which is not yet diſco-vered. Unknown power.

It would be uſeleſs, nay perhaps injurious to ſociety, to enumerate all

the poiſons which belong to the different heads. It is dangerous to entruſt ſuch materials in the hands of mankind in general : we hope, therefore, we ſhall be excuſed if we mention only the principal ones, according to the foregoing arrangement. They are all taken from the animal, vegetable, and mineral kingdoms.

Acrids what.

The 1ſt claſs or acrids, include acids, and alcalies ; among the laſt of which may be included the effects of the putrefactive proceſs, as being expoſed to its influence.

Thoſe poiſons of an acrid nature which have a mixed quality, are the metallic ſalts, or ſome of the ſemi-metals themſelves, as arſenic, &c. and ſome vegetables which are of a highly draſtic nature, and which, uſed in ſmall quantities, may produce uſeful evacuations in caſes of diſeaſe.

Stupefyers.

2d. The poiſons which have a ſtupefying quality are of the vegetable kind, as the Cicuta, lauro ceraſus, &c.

3d.

3d. Thoſe which act mechanically by the ſharp points and edges with which they are endued, are the powder of glaſs, diamonds, &c. Mechanic powers.

4th. Thoſe which have a ſuffocating power, are the vapours of new and fermenting liquors, the ſmoke of charcoal and of ſulphur, the air of cloſe and damp places, &c. Suffocations.

5th. Thoſe which have a viſcidity joined with acrimony, are generally vegetables, ſuch as Cicuta major, ſolanum, &c. Viſcid.

6th. Thoſe which are of a thickening quality, and a drying one at the ſame time, are quick-lime, Ceruſſe; and among the vegetables, ſeveral of the claſs of fungi, &c. Dryers.

7th. Thoſe which have a ſecret quality not eaſily diſcovered, are the various tribes of animals which live around us, ſuch as ſpiders, toads, vipers, &c. Unknown qualities.

How poiſons affect the body.

The effects which poiſons produce upon the body vary, according to the nature of their qualities, the place which they affect, and the ſubjects to whom they are applied, according to age, temperament, habit of body, &c.

Aconite.

Thus the aconite affects the lips, mouth, forehead, tongue and ſtomach, by making them to ſwell, and cauſes anxieties, vertigoes, faintings, and convulſions.

Cicuta.

The cicuta occaſions enormous vomitings, hiccups, heat of the ſtomach, ſwelling of the belly, delirium, and convulſions.

Acids.

The acid ſpirits, wherever they touch, cauſe eroſions, moſt grievous pains, vomiting, and hiccup.

Arſenic, &c.

Arſenic and cobalt excite inflammations of the ſtomach, &c. the moſt acute pains, heat in the mouth and jaws, nauſea or ſickneſs, vomiting, ſpaſmodic contractions of the cheſt, ſwelling of the belly,

belly, coldneſs of the extremities, cold ſweats, convulſions, &c.

When a medical practitioner, therefore, is called to a perſon who is ſuſpected to be poiſoned, if he be alive he may judge from the following obſervations. How to judge in a living ſubject.

1ſt. From comparing the ſymptoms which preſent themſelves with thoſe which generally attend the taking of poiſons mentioned above. From ſymptoms above.

2d. From the ſudden appearance of ſome ſymptoms, ſuch as ſpaſms and violent pains, great thirſt, ſickneſs, vomiting, fainting, cholic, the throwing up ſome foreign matter from the general contents of the ſtomach, and univerſal convulſions of all the muſcles. From ſuddenneſs of ſome ſymptoms.

3d. From the health of the patient foregoing this attack, and his not having any connection with a perſon labouring under any contagious or epidemic diſeaſe. Previous health.

No errors in diet.

4th. From the patient having committed no errors in diet, &c.

From odour and taſte.

5th. From an ungrateful odour and taſte of what has been taken. There are few poiſons but what are attended with a very diſagreeable ſmell and taſte; hence a ſuſpicion ſoon ariſes from this ſource, which if immediately taken notice of, the patient may ſoon receive the proper relief.

How to judge in a dead perſon.

But if the perſon be dead, a very minute examination muſt be made, and the following particulars attended to.

From external habit.

1ſt. The external habit of the body is to be inſpected with the greateſt accuracy and attention, to diſcover whether there be any livid ſpots upon the ſurface of the ſkin; whether there are any premature ſigns of putrefaction, and whether there be any ſwelling of the belly, or of the face; for experience evinces that theſe changes

are

are ſoon induced by poiſonous ſubſtances.

2d. The paſſages by which the poiſon has been conveyed into the body, are to be examined: theſe are the mouth, the throat or gullet, the ſtomach, and the inteſtines; but chiefly the ſtomach, as the ſame effects will be produced in it as in the other parts. We muſt examine then firſt into its conſtitution, and then into its contents. The paſſages. Principally the ſtomach.

When we examine the conſtitution or form of the ſtomach, we muſt conſider, In its conſtitution.

1ſt. Whether it be inflated or corrugated in an extraordinary manner.

2d. Whether it be inflamed or in a ſtate of gangrene or mortification.

3d. Whether it exhibits upon its external ſurface ſupernatural ſpots, either of a red colour, or black or livid.

4th. Whether it be perforated into holes, either one or many.

5th. Whether its veins be tinged with blood more than uſual.

6th. Whether it be eroded, and its inner coat be ſtripped off and and bloody, and ſwim amongſt the other contents.

7th. Whether there be any eſchar in its ſubſtance, of a black or yellowiſh colour.

All theſe marks afford very ſtrong ſuſpicions of poiſons, eſpecially of thoſe which are acute and acrid.

Contents of the ſtomach.

The next obſervations are to be made upon the contents of the ſtomach, previous to which two circumſtances muſt be attended to.

1ſt. All the contents of the ſtomach are to be thrown into a veſſel prepared for that purpoſe.

2d. The ſurface of the ſtomach is to be inſpected more carefully, to diſcover, if poſſible, whether particles of the poiſon may not ſtick to it, which are to be collected.

The

The contents of the ſtomach are to be conſidered as more or leſs fluid; if they are not entirely ſo, but conſiſt of many ſolid ſubſtances, then a portion of them is to be dried and put into an iron veſſel lined with tin, and being previouſly weighed, the following experiments are to be made upon it. Solid.

1ſt. It is to be thrown upon burning coals, which if it produces a vapour of a blue colour, and an odour like that of garlic is perceived, it may be nearly aſcertained that an arſenical matter was mixed with it. But in order to clear up this point to greater ſatisfaction. To be tried by burning.

2d. Another portion of the dried maſs is to be given to other animals, ſuch as fowls, dogs, &c. which if it cauſes their death, it is a proof that poiſon made a part of its contents. By other animals.

3d. Another portion of this dried maſs is to be mixed with a quantity of Mixed with ſuet and ſal. tart. and melted.

of ſuet and ſalt of tartar, which being put into a crucible, and melted over the fire, if a reguline metallic ſubſtance is produced at the bottom, it is clear that an arſenic is contained in it.

Melted with other metals.

4th. It may be enquired, whether this metallic ſubſtance being melted again with metals of a red colour, turn them to a white, for this is likewiſe proof of arſenic.

Remainder weighed.

The remainder of the dried contents, if poiſon be found upon experiment, muſt be nicely and accurately weighed. This is to diſcover, whether the proportionate quantity would be ſufficient to produce the effect. But in general, where arſenic has been adminiſtered, ſo ſmall a quantity is ſufficient to produce the moſt dreadful influence, that it will be nearly ſatisfactory, if any of it be found upon a chemical examination.

When

When the fluid parts of the ſtomach are examined, the following experiments are to be made. Fluid parts examined.

1ſt. An alcaline liquor, as oil of tartar per deliqnium, for inſtance, is to be thrown in, and if it take a browniſh colour, it is a proof that mercury, in the ſhape of corroſive ſublimate, or precipitate, has been mixed with it, if it ferments, that an acid has been exhibited. This however is no certain ſign, as an acid may ſubſiſt very innocently in the ſtomach. By alcalines.

2d. An acid may be applied, and here if an effervescence be produced, it is a proof of an alcaline ſubſtance, and then, as in the laſt caſe, it muſt be by the quantity and acrimony of the ſubſtances that we determine, concerning their poiſonous nature, as in themſelves, and when well diluted, they are innocent, and ſometimes ſalutary. By acids.

3d.

By colour. 3d. The colour is likewiſe to be attended to, as it may determine the exact nature of the poiſon which is given.

By chemical analyſis. 4th. Some portion of the poiſon found may be ſent to a chemical elaboratory, to examine more particularly its nature.

Theſe obſervations, it ſhould be remarked, however, relate more particularly to poiſons which produce their effect more immediately, than to thoſe which lie a long time firſt, in the ſtomach. But we may, from the injuries done to the ſtomach itſelf, determine likewiſe in ſome meaſure concerning even thoſe more ſlowly acting poiſons. The remains of inflammation, gangrene, perforations, &c. will continue for a long time, and if the patient ſhould die of poiſon at ever ſo great a diſtance, whilſt the cauſe ſubſiſts ſome effect will evidently be perceived,

ceived, or ſome change from a natural ſtate.

2d. Of wounds. Under wounds may be comprehended every diſorder which ariſes from ſome external violence offered to the human body. To this head, therefore, may belong contuſions, luxations, fractures, and wounds, more properly ſo called, being a diviſion of the muſcular parts of the body. The firſt diviſion of wounds is into mortal, and the contrary. Every wound is of ſuch a nature, that death is abſolutely the conſequence of it or not. In the latter caſe it may be called mortal by accident. This alſo we may divide into two kinds or orders. That wound which is ſo inflicted that it may be relieved by the means cognizable by art, is of the firſt order. That where it happens that the death which is incurred, is owing not to the wound, but to other cauſes, then the wound

Wounds defined.

Diviſion.

Mortal what.

Mortal by accident.

wound is ſaid to be of the ſecond order of ſuch as are called mortal by accident.

From what hath been advanced, the following poſitions may be deduced.

Poſitions.

1ſt. Every wound, abſolutely mortal, will admit of no relief, but will certainly deſtroy, either by a ſudden or lingering death.

2d. Death is always the inſeparable effect of a wound abſolutely mortal.

3d. A wound abſolutely mortal is always the *ſole* cauſe of death to the injured perſon.

4th. The conſequences here avail nothing: the wounded perſon, after the wound is inflicted, is to all intents and purpoſes a dead man; the injury then is abſolutely mortal.

5th. Wounds are by accident mortal, when the cauſe of death ariſes partly,

partly from the wound, and partly from other concurring cauſes.

Theſe diſtinctions are neceſſary, though not always attended to; for it may ſo happen, where men judge alone from conſequences, that a perſon may be puniſhed for a death occaſioned by a wound which was not abſolutely mortal. It is highly important that in a depoſition for murder, ſuch diſtinctions ſhould be made of theſe kinds of wounds, as to place them in their proper light. In order to do this more effectually, it is neceſſary to make the following diviſions. 1ſt. To conſider thoſe kinds of wounds which are abſolutely mortal, or mortal by accident. 2d. In what parts of the body ſuch wounds are moſt likely to be inflicted. 3d. Some circumſtances which may occur to diſtinguiſh ſuch wounds more accurately.

Reaſons for ſuch diſtinctions

Diviſion of rules.

I. It appears then, that becauſe a mortal wound cannot be cured by

What kind of wounds mortal.

any art, that every wound which entirely takes off the influx of the blood into the heart, from the vein, and its egreſs from the heart into the arteries, or which entirely deſtroys the powers of circulation, and the action of the heart, muſt be abſolutely mortal.

Actions of the heart promoted by.

From the elements of phyſiology it appears, that the following circumſtances are neceſſary to promote the action of the heart.

Soundneſs of walls.

1ſt. The ſoundneſs of the ſides of the cavities of the heart, ſo as to be able not only to contain the blood, but to puſh it forward into the ſyſtem. The ſtrength required here is amazingly great.

Action of the brain.

2d. A free action of the brain and nerves going to the heart, called the cardiac nerves.

Coronary arteries.

3d. The motion of the blood through the coronary arteries which ſurround the heart.

4th.

4th. A free motion of the blood through the lungs. Lungs.

5th. A proper return of blood through the veins. Proper return.

6th. A renewal by the aliment of nutriment to reſtore the expence which is incurred by the ſeveral ſecretions, &c. It appears then that all wounds are abſolutely mortal, Aliment. Mortal in that order.

1ſt. Which injure the cavities of the heart, ſo that they cannot contain the blood.

2d. Which take away the free action of the brain and nerves going to the heart, ſo that neither ſenſe nor motion can be promoted in that organ ſo eſſential to life.

3d. Which deſtroy reſpiration, for then the blood cannot be carried through the lungs.

4th. Which ſtop the motion of the blood through the coronary arteries.

5th. Which prevent its return through the veins.

6th. Which prevent the uſe of nutriment, and conſequently the acceſſion of chyle.

It appears then, that the ſubject of wounds abſolutely mortal are thoſe parts whoſe ſoundneſs cannot be taken away, and life continue; and that many of thoſe wounds which happen in internal parts, to which the medical aid cannot reach, are to be conſidered as abſolutely mortal.

Wounds mortal by accident.

When a wound is mortal by accident, death is either to be attributed to it in part as a concurring circumſtance, or not at all: as in ſuch caſes as the following.

When left to themſelves.

1ſt. Where death is occaſioned by wounds being left to themſelves, as for inſtance, wounds of the head which may be cured by the uſe of the trepan; thoſe of the greater blood veſſels, where acceſs may be acquired; thoſe of the viſcera, where the hand may be applied, and medicines may be adminiſtered;

niſtered; thoſe which induce death by evacuations into cavities, which might be prevented, or from which they may eaſily be diſcharged.

2d. Where other cauſes may be the occaſion of death, as the particular conſtitution, or habit of the wounded perſon, as well as his neglect and want of prudence, the fault of the medical practitioner, the blunders and careleſsneſs of by-ſtanders, or ſome previous diſorders which may have prevailed. Where there are other cauſes

II. We are now to conſider the ſecond general diviſion, or thoſe wounds of the different parts of the body which are to be accounted mortal abſolutely or not; and here we ſhall treat of them in the following order: 1ſt. Wounds of the head and neck. 2d. Wounds of the cheſt. 3d. Wounds of the abdomen or belly. 4th. Wounds of the extremities. Parts where wounds are mortal or not.

Of the head

I. Of wounds of the head.—Theſe are external or internal, which may be again diſtinguiſhed according to any injury done to the brain, &c. or not.

External.

1ſt. External wounds of the head, whether they are wounds of the integuments, or of the pericranium, or of the bones compoſing the ſkull, or of the face, are not abſolutely mortal.

Internal.

2d. Internal wounds of the head, unaccompanied with injuries of the brain, &c. are not to be accounted abſolutely mortal.

Where brain, &c. affected.

3d. Thoſe wounds of the inner part of the head, where the brain, &c. likewiſe is injured, are to be accounted abſolutely mortal, or not, according to the following diſtinctions.

1ſt. Wounds of the dura mater, where there is no ſinus or branch of the greater artery running acroſs it that is injured, are not abſolutely mortal.

2d.

2d. Wounds of the dura mater in its ſinus, and the greater artery, are to be accounted abſolutely mortal.

3d. All wounds of the contents of the ſkull, which are attended with great extravaſations of humours which cannot be evacuated: as in the ventricles of the brain, and the baſe of the ſkull, are to be accounted abſolutely mortal; ſuch are, what are made at the bottom of the ſkull, in the bones of the temples, the ethmoid bones, and the inferior orbits of the eyes.

4th. Slight wounds of the brain itſelf, or of the ſuperficial part of the cerebellum, are not abſolutely mortal.

5th. All wounds of the cerebellum, which are deep, and of the medulla oblongata, are accounted abſolutely mortal.

6th. All injuries of the origin of the ſpinal marrow, and all deep wounds through its whole length, may be pronounced abſolutely mortal.

Wounds of the neck.

With regard to wounds of the neck, we may make the following obſervations.

Internal jugular veins.

1ſt. Wounds of the internal jugular veins are abſolutely mortal; thoſe of the external, only ſo by accident.

Carotid arteries.

2d. Wounds of the carotid and vertebral arteries, may be pronounced abſolutely mortal.

Internal maxillary.

3d. Wounds of the internal maxillary artery, and the ſublingual artery, belong to thoſe eſteemed abſolutely mortal, if they cannot be healed.

Branches of carotid.

4th. Wounds of the branches of the carotid artery, which can be tied or compreſſed ſo as to ſtop the blood, may be accounted mortal by accident.

Intercoſtal nerves, &c.

5th. Wounds of the intercoſtal nerves, and of the parvagum, and of the phrenic nerves, which run through the neck, induce abſolute death.

6th.

6th. Wounds of that plexus of nerves which reaches from the ſpinal marrow to the arm, are the cauſes of death. From ſpinal marrow to arm.

7th. All luxations of the firſt and ſecond vertebræ bring abſolute death. Luxations.

8th. Small wounds of the œſophagus, or gullet, are only mortal by accident; but if the gullet be cut through, they are amongſt thoſe which are accounted abſolutely mortal. Oeſophagus.

9th. In the ſame manner ſlight wounds of the *aſpera arteria*, or wind-pipe, belong to thoſe which are mortal by accident; but if it be cut thro', they are always mortal. Wind-pipe

10th. All violent ſtrokes upon the *larynx*, or cartilaginous muſcles, on the top of the wind-pipe, ſo as to deſtroy their tone and power of action, will ſpeedily induce the death of the ſufferer. Larynx.

Wounds of cheſt.

II. Wounds of the cheſt are of two kinds, as they are made in the cavity, or in the parts ſurrounding it. Of the former,

Heart.

1ſt. All wounds of the heart, which penetrate into its cavities, i. e. into its ventricles, or auricles, are abſolutely mortal. The ſame may be ſaid,

Coronary arteries.

2d. Of all wounds of the coronary arteries, which ſurround the heart, and all the great arteries and veins which carry blood from the heart, and bring it back again.

Intercoſtal arteries.

3d. Wounds of the intercoſtal arteries, or ſmall veſſels which paſs between the ribs, are only mortal by accident.

Gullet.

4th. Wounds of that part of the gullet which lies in the cheſt, are abſolutely mortal. The ſame may be ſaid,

Wind-pipe

5th. Of wounds of the wind-pipe in the ſame ſituation.

6th.

6th. All wounds of the pericardium, or bag containing the heart, are not abſolutely mortal Pericardium.

7th. Wounds of the lungs, which pierce the great blood veſſels, are abſolutely mortal; but thoſe which penetrate the ſmaller veſſels, are only accidentally ſo. Lungs.

8th. Wounds of the air veſſels of any magnitude, are abſolutely mortal. Bronchia.

9th. Superficial wounds of the muſcular part of the diaphragm, or midriff, are mortal only by accident; but thoſe which pierce the tendinous are abſolutely ſo. Diaphragm

10th. Injuries to the thoracic duct, which convey the chyle, are mortal abſolutely, as are, Thoracic duct.

11th. Thoſe of the cardiac nerves, &c. Cardiac nerves.

II. Wounds made upon the parts ſurrounding the cheſt, are to be judged by the following deciſions. Surrounding the cheſt.

1ſt. All external wounds of the cheſt are not abſolutely mortal.

2d.

2d. A ſimple luxation or fracture of the ribs, is not abſolutely mortal.

3d. Conſiderable bruiſes, and injuries of the walls of the cheſt, with dilacerations of the intercoſtal arteries, are abſolutely mortal.

4th. A wound of the cheſt, where one ſide only is penetrated in a certain place, is mortal by accident.

5th. Every wound which is of any ſize, that pierces both ſides of the cavity of the cheſt, is abſolutely mortal.

As the cheſt is the ſeat of the great fountain of blood, it is no wonder that any injuries committed there ſhould be mortal, and even in thoſe caſes where the exceptions are made, the hœmorrhage of itſelf may cauſe death.

Wounds of abdomen.

III. Wounds of the abdomen, or lower belly, are judged by the following rules,

1ſt.

1ſt. Every wound of the abdomen which does not penetrate into its cavity, whether it be a wound of the integuments, or of the muſcles, or of the *linea alba*, as it is called, or of the navel, or of the abdominal ring, are not abſolutely mortal, nor are they ſuch when they do penetrate the cavity, when none of the contents are injured.

2d. Wounds of the *omentum*, or caul, where its blood-veſſels are hurt, ſo that the hœmorrhage cannot be reſtrained by any art, are abſolutely mortal, otherwiſe they are mortal only by accident. Omentum.

3d. Wounds of the ſtomach are abſolutely mortal, when many of the nerves are at the ſame time injured, when ſome of the principal blood-veſſels are cut through, or they are made in ſuch a place, that the food cannot arrive at the hollow part of it, but is thrown into the cavity of the abdomen. Stomach.

men. The ſame may be obſerved where the bottom or curvature of it is wounded, or it is puſhed to one ſide.

Small inteſtines.

4th. A wound in the ſmall inteſtines, ſo as to ſeparate them from the ſtomach, is abſolutely mortal.

Great inteſtines.

5th. Wounds of the great, as well as ſmall inteſtines, at ſome diſtance from the ſtomach, which do not divide the tube, are not abſolutely mortal.

Liver if great.

6th. Wounds of the liver, which are deep and broad, and are ſuppoſed to be connected with injuries done to the large veſſels paſſing through it, are abſolutely mortal; in like manner are any wounds of the duct of the liver, of the cyſtic duct, of the gall-bladder, of the *ductus choledochus*, of the vena portarum, or of the artery of the liver.

Small wounds of liver.

7th. Slight wounds of the liver, which do not occaſion an extravaſation of the humours, are mortal only by accident.

8th.

8th. A rupture of the liver is always abſolutely mortal. Rupture of liver.

9th. Deep and broad wounds of the ſpleen are abſolutely mortal, as well as a rupture of the ſpleen, but ſlight wounds are only mortal by accident. Spleen,

10th. All wounds of the receptacle of the chyle are abſolutely mortal; the ſame may be pronounced of Receptacle of chyle.

11th. All the great veſſels, arteries, and veins, and the nerves which run through the abdomen. Great veſſels.

12th. Wounds of the *pancreas*, or milt, as the trunks of many large veſſels paſs through it, are abſolutely mortal. The ſame may be ſaid, Pancreas.

13th. Of wounds of the meſentery, or external covering of the bowels, for the ſame reaſons, upon account of the veſſels. Meſentery.

14th. Wounds of the kidney, which reach to the boſom of it, and cut off the ureters, are abſolutely mortal; Kidneys.

tal; ſlighter ones are only ſo by accident.

Bladder. 15th. Wounds of the urinary bladder, where the blood cannot be ſtopped, are abſolutely mortal, and no excuſe can be made here from wounds being inflicted by ſurgical operations. Such being immediately under the eye of the operator, can be eaſily reſtrained, ſo as to have no ill effect.

Genitals in men. 16th. Wounds of the external parts of generation in men, in which may be included contuſions of the teſticles, are not abſolutely mortal.

Womb. 17th. Wounds of the womb are abſolutely mortal.

Extremities. IV. Wounds of the extremities in general are not abſolutely mortal, but ſometimes they are, as when they are made upon the trunks of the largeſt veſſels, in which caſe ſuch an hœmorrhage may ariſe, as no art can reſtrain, or from the vital powers being weakened, a moſt powerful and fatal gangrene

grene or mortification may be occaſioned, and ſo as to elude the force of medicines.

III. We come now to the laſt diviſion of rules, concerning wounds, to examine ſome circumſtances by which the mortality of their nature may be more exactly aſcertained. Theſe relate, Further rules on wounds.

1ſt. To the wounded perſon himſelf, in whom we ſhould attend to his age, his conſtitution of body, his exemption from former injuries, or his ſubjection to diſeaſe, the ſex, and if a woman, whether ſhe be pregnant or not; the ſtate of his mind, and how far his imagination might increaſe the efficacy of the wound; and laſtly, whether he was at the time inebriated with liquor. All theſe circumſtances aggravate the mortality of wounds. From the wounded perſon.

2d. To the ſymptoms which occur, either immediately upon a perſon's being wounded, or which appear ſome time after; the ſymptoms beſides theſe may be of three kinds. Symptoms.

1ſt. Thoſe which acknowledge the wound to be their ſole cauſe.

2d. Which depend upon the wound partly as their cauſe.

3d. Which do not acknowledge the wound to be their cauſe at all. Now in reviewing the ſymptoms, it will appear that the firſt alone are objects of attention.

Inſtrument

3d. To the inſtrument with which the injury was effected, in which its figure, its ſize, its power of acting, are to be taken into conſideration.

Time.

4th. To the time when death may occur after the wound is given.

Cure.

5th. To the methods made uſe of to effect a cure.

Expoſure.

6th. To many occurrences which may ariſe from the circumſtances of time, and any other accidents which might render a wound more dangerous, ſuch as cold air, or a deſert place, where no one might be ready to aſſiſt.

CHAP.

CHAP. VII.

OF IDIOTISM AND INSANITY.

Objects of civil power

WHEN the ideas of the mind are diſtracted, and thought and reaſon are confuſed and deſtroyed; it is common for the civil power, not only to take cognizance of the unhappy perſons ſubject to ſuch misfortunes, but to deprive them of their eſtates for a time, and put them under proper confinement. As the conſequences are ſo dreadful, it is neceſſary then that the deciſion be eſtabliſhed upon the firmeſt and moſt ſatisfactory proof.

How diſtinguiſhed.

Idiotiſm and inſanity, though puniſhed in the ſame manner, ſeem to vary from each other. It may be neceſſary then to ſpecify the proper diſtinctions of each.

Idiotiſm natural.

I. Idiotiſm is 1ſt, either born with the ſubject of it, or appears as ſoon as the reaſoning faculties ſhould begin to expand.

Depends on defects in memory and judgment.

2d. It is eſtabliſhed upon great defects of the memory, and much greater of the judgment, though this is not much attended to.

Prone to miſchief.

3d. Idiots are in general prone to miſchief, or to actions over which reaſon ſeems to have very little command.

Inſenſible to evacuations.

4th. They have not a proper command over the evacuations of fæces and urine, and drivel at the mouth.

Health.

5th. They have generally ſtrong and hearty conſtitutions.

Aſpect peculiar.

6th. They have a peculiar aſpect, which deſcribes a vacancy of thought and inattention to any engagement.

Inarticulation.

7th. They have little uſe of ſpeech, and articulate very incoherently.

Inſanity cauſe of.

II. Inſane perſons are either furious or melancholic, both of which acknowledge a great imbecility of the mental

mental faculties, and which are derived from hereditary conſtitutions, attention of mind, violent paſſions, the terrors of a falſe religion, immoderate uſe of venery, poiſons of the narcotic kind, ſome preceding diſorders, the ſuppreſſion of evacuations, indigeſtible aliments, a ſedentary life, &c. But they differ in the following particulars.

1ſt. The furiouſly inſane are naturally of angry and violent diſpoſitions, in the prime of youth, and of a plethoric conſtitution, and tenſe fibre. Furious ſigns of violent diſpoſition.

2d. They loſe all their natural delicacy of manners, and become furious, ungovernable, and are particularly affected by pride, anger, hatred, and revenge, and very often intemperate luſt. Subject to paſſions.

3d. They refuſe their food, and yet preſerve their ſtrength; they ſcarcely ever ſleep, are continually Refuſal of food.

ſhifting their ideas from one thing to another, bear the cold with incredible patience, and are not eaſily affected by medicines.

Peculiar look.

4th. They have a peculiar look with their eyes, deſcriptive of violent anger mixed with a glarineſs like that of drunken perſons, their eye-lids are conſtantly vibrating, and their hands, and ſometimes the whole body, they keep in motion.

Melancholic.

Melancholy perſons are,

phlegmatic

1ſt. Naturally dull, ſlowly learning, and eaſily forgetting, and are ſad and melancholy, of a phlegmatic temperament, and relaxed fibre.

Fearful, &c.

2d. When the diſorder ſeizes them they become abject, fearful, fond of ſolitude, prone to anger, changeable in their opinions and deſires, but fixing their attention upon a ſingle object.

Conſtruted in bowels, &c.

3d. The belly is conſtipated, the urine is made in ſmall quantities; the abdomen is diſtended with wind; a ſharp

ſharp acrid matter is diſcharged by vomiting; the pulſe moves very ſlowly; the aliment is devoured with greedineſs; the imagination is perverted ſo, as that they are perſuaded that they are made of glaſs, china, &c. and laſtly, and worſt of all, they are induced to put a period to their exiſtence.

4th. Their eyes have a dull, heavy, and ſtupid look; they ſeldom move, but continue in one poſture a very long time. Aſpect dull.

CHAP. VIII.

OF IMPOSTORS.

Various cauſes of impoſition.

THERE are various cauſes which induce men to feign diſorders to which the human body is ſubject, and with ſuch fictions to impoſe often upon a court of judicature, or at leaſt a civil magiſtrate. To this they are induced from fear, from baſhfulneſs, or from lucre. Should they be ſubmitted to a phyſician upon ſuch an occaſion, he can only judge from the ſymptoms of the diſeaſe, and determine by their preſence and abſence. But there are many caſes where artful people, by a ſpecious tale, and by feigning diſorders where much is to be known from their own confeſſion, may cauſe a good deal of difficulty to diſcover the truth. Let him then attend to the following circumſtances.

1ſt.

1ſt. All the phœnomena which evidently appear in the ſubject at the time of examination, together with ſuch as may be related by the ſick perſon, or the ſtanders by, are to be carefully and maturely weighed. Phyſician ſhould conſider the phœnomena.

2d. An account is to be taken of the urine, age, pulſe, hereditary diſpoſition, way of living, condition of the perſon, and the diſorders to which he has been ſubject. Take account of natural appearances.

3d. The queſtions which are to be put to the ſick perſon, or the by-ſtanders, are to be ſo framed as to confound them. Confound the ſubject.

4th. The pretended ſick perſon is to be viſited frequently, and when he leaſt expects it. Frequently viſited.

5th. Enquiry is to be made whether ſuch cauſes as generally produce the feigned diſeaſe have previouſly preſented themſelves. Enquire into cauſes.

There

Diſeaſes feigned.

There are many diſeaſes which may be feigned, particularly by a perſon who has before ſuffered from them, and eſpecially if they be devoid of fever, and depend upon his own relation; yet there are but a few which are generally objects of impoſition. Theſe are epilepſy, melancholy, fooliſhneſs, poſſeſſion by evil ſpirits, and faſcinations.

Epilepſy.

I. A feigned epilepſy may be known from a real one,

1ſt. When the ſick perſon does not fall to the ground very ſuddenly.

2d. When the face is not livid, nor the lips pale, nor is there any change made in the colour and real form of the face.

3d. When the patient is ſoon rouſed by ſternutatories, or burning coals applied to the hands.

4th. When the nails do not appear livid.

5th,

5th. When the pulſe is not altered.

6th. When at the end of the paroxyſm the patient does not fall into a profound ſleep.

7th. When he does not complain of a dullneſs of ſenſation, forgetfulneſs, a ſwimming of the head, great weakneſs, and thirſt.

II. A melancholy that is feigned may be known by the abſence of thoſe ſymptoms mentioned in the laſt chapter. Melancholy.

III. We may conclude that fooliſhneſs is fictitious, when the perſon at any time appears rational: for perſons afflicted in this manner are not furious as madmen, nor thoughtful as the melancholy; but ſpeak confuſedly, neglect themſelves, and ſing and talk like children. Fooliſhneſs.

IV. Poſſeſſions by evil ſpirits, as they conſtitute no real diſorder, can never Poſſeſſions.

never be feigned; the pretences therefore of ſuch perſons, will not be detected by phyſicians.

Faſcinations. V. The ſame may be ſaid of incantations, faſcinations, &c.

CHAP.

CHAP. IX.

ON THE MEANS OF PRESERVING THE PUBLIC HEALTH.

THE general health of the public, which is of ſo much conſequence, eſpecially in large towns, calls loudly for the attention of the magiſtrate, who ſhould exert every nerve to preſerve and ſupport it. This is beſt done by frequently conſulting phyſicians of the firſt eminence, concerning the proper means to be embraced, and it would be highly uſeful if they were to be veſted with proper authorities, and put in practice any ſcheme of this ſort which they might think advantageous to the general ſervice.

An object of conſideration.

How beſt executed.

The health of the community ſeems in the beſt way of being preſerved, when the following particulars are

are obſerved, and it is no ſmall matter to ſee them regularly put in execution.

1ſt. When every thing which may tend to injure the public health is properly prevented or averted.

2d. When care is taken that the ſick have every aſſiſtance to remove the diſeaſe with which they are afflicted, or at leaſt to mitigate its rage.

3d. When contagious and epidemical diſorders are guarded againſt, and the ſpread of them, when they do prevail, prevented.

By averting the cauſes of diſeaſe.

I. The cauſes which are injurious to the health of the community may be averted,

By purifying the air.

1ſt. By preſerving the air, as much as poſſible, from the effects of putrefaction, which muſt be done by removing all kinds of putrid bodies, both animal and vegetable, for vegetables in this corrupt ſtate are more offenſive, or at leaſt as much ſo, and conſequently equally pernicious with animals.

animals. The lay-ſtalls of butchers ſhould always be ſituated at the extremities of towns, and large ceſs-pools ſhould be made covered with earth, to receive the blood and offal meat. Butchers likewiſe ſhould be puniſhed for keeping their meat till it be too ſtale for uſe. It is not only improper upon account of the ſmell, but poor people, by reaſon of the reduced price, are induced to purchaſe it, and thus contribute to unwholeſome diſeaſes.

The water alſo of towns ſhould be carried off, and not ſuffered to ſtagnate in the ſtreets. It is generally putrid in itſelf, but much more ſo when it becomes a receptacle for all kinds of filth. Hence we ſee that moſt towns which are not accommodated with common ſewers, are very unhealthy. The laſt thing to be conſidered under this head are the burying grounds,

which

which ſhould always be removed to ſome diſtance from a town.

By wholeſome proviſions.

2d. The next means for removing the cauſes of injuries to towns, &c. is, by taking care that the corn be not of an unwholeſome and putrid nature; that the fleſh of animals be not diſeaſed; that the fruits be properly ripened; that the wine be not poiſoned nor the beer foul and vapid; and that all vegetables of a deleterious quality, be not admitted to be ſold.

By good water.

3d. By taking care that the water which is drank be tolerably pure, or free from any mineral ſubſtances, which may be prejudicial to health. This is not always eaſily aſcertained, and will require a chemical analyſis.

By regulating the uſe of ſpirits.

4th. By regulating the uſe of the ſtill, and taking care that too much fermented liquors be not prepared.

By quantity of food.

5th. By providing a ſufficient quantity of wholeſome food for the uſe of the poor.

6th.

6th. By ſuppreſſing the common ſtews, or at leaſt regulating them in ſuch a manner, as that the diſorders now peculiar to ſuch places, and the common effects of riot and drunkenneſs, be as much as poſſible prevented. In a moral light, no vice can be tolerated by the civil power; but in a phyſical view, we ſhould certainly prevent many of the deleterious effects of the venereal diſeaſe, if not in time eradicate it, by having the brothels under the eye of the magiſtrate, who could appoint inſpectors under a licence, who ſhould regularly make their report, and confine the ſubjects of it in ſome well regulated hoſpital. If any way then could be thought of, which ſhould avoid the encouragement of vice and yet admit of ſuch an inſpection, it would no doubt be of very great benefit to ſociety.

Suppreſſing ſtews.

7th. By inſane perſons being properly confined and provided for.

Confining the inſane.

Deſtroying mad animals.

8th. By deſtroying mad animals, and when ſuch are roving about, taking care that others are not ſuffered to go looſe, but confining them in yards, or other places within walls, &c. I do not think it proper to tie them up, as by their uneaſineſs and watchfulneſs, they may bring on them the diſorders we would wiſh to prevent.

Suppreſſing quacks.

9th. By ſuppreſſing as much as poſſible all mountebanks and quacks, and other pretenders to the practice of phyſic. No one can tell how much they injure ſociety, by violent medicines, the effects of which they do not ſee, they may introduce ſome fatal diſeaſe, and by inefficacious ones they prevent the effects of thoſe which are proper.

Preventing irregular practitioners.

10th. By preventing apothecaries, midwives, &c. from practice, unleſs properly recommended.

Preſerving foundlings.

11th. By taking care that foundling infants, or others who may be deſerted

ſerted by their parents, be taken care of, and educated at the public expence.

12th. By preventing any perſons from ſelling drugs who are not bred to the buſineſs of an apothecary or druggiſt, or do not underſtand the nature of medicines. Regulating the ſale of drugs.

13th. By regulating the ſhops of thoſe who ſell drugs, ſo that the more active medicines, ſuch as vomits and purges, emmenagogues, and the mineral acid ſpirits, be not promiſcuouſly arranged with the reſt, but be kept in ſome private drawers, or in an inner room, to which no one ſhould have acceſs but the maſter. At the ſame time, particular care ſhould be taken of the labels, ſo that they make diſtinct marks, &c. And Shops

14th. That it be enjoined midwives and ſurgeons to call to their aſſiſtance the moſt able phyſicians, in caſes of danger, and that for this purpoſe, phyſicians accommodate their fees Promoting conſultations.

to the abilities of the patient, ſo that all may receive the benefit of their advice.

Cæſarean operation.

15th. By midwives preſerving the live child by a diſſection, ſhould the mother unfortunately die during the pains of labour.

Preventing diſeaſes of cattle.

16th. By guarding againſt the contagious diſorders which often ariſe among the horned and other cattle.

Diſeaſes are removed.

II. The beſt care is taken that the diſeaſes of the ſick be as ſpeedily as poſſible removed.

By providing proper phyſicians.

1ſt. When phyſicians of great knowledge and the moſt liberal education are provided to order medicines, and illiterate and immoral men be not ſuffered to obtrude themſelves on the public.

Public hoſpitals.

2d. When public hoſpitals are eſtabliſhed, and ſo conducted as to accommodate all the ſick poor who may offer.

3d.

3d. When ſurgeons and apothecaries, and midwives who are ſkilful in this buſineſs, are conſtituted by the public to execute their part of the buneſs, which they undertake with carefulneſs and aſſiduity. Surgeons and apothecaries.

4th. When the apothecaries ſhops are occaſionally viſited by the phyſicians, to ſee that their drugs are of the beſt quality, and provided in ſufficient quantity for the exigencies of the ſick: that their bottles and other veſſels be preſerved clean, and fit to contain the ingredients depoſited in them: that the medicines be preſerved in a proper place to preſerve them from injury, and that the ſhopmen or apprentices be induſtrious, ſober, and fitted for their buſineſs. Viſiting ſhops.

III. The next thing to be attended to is, by what means contagious and epidemic diſeaſes are to be prevented and removed. Theſe are of two kinds, what is called the plague, or Contagious diſorders remedied.

any other diſeaſe of the ſame nature, though leſs deleterious.

Of the plague; rules for regulating it.

I. The plague is a diſeaſe of ſo alarming a nature, that every precaution ſhould be taken by magiſtrates to prevent its acceſs.

The following ſeem to comprehend the principal regulations neceſſary to be obſerved.

By purification of air.

1ſt. The purification of the air is to be ſtudied, and every thing put in execution that can promote this end. Some have propoſed, for this purpoſe, the exploſion of great guns, the lighting up of fires, &c. Theſe can only have effect in rarefying the air, as heat is found to contribute to promote this diſeaſe, as deſcribed by Doctor Mead. The church bells, for the ſame purpoſe, are frequently to be rung, and the greateſt cleanlineſs in the ſtreets, and all public places, is to be obſerved. Beſides this, ſulphur and pitch, &c. may be burnt in the open

open places, and vinegar may be evaporated in the chambers and inſides of houſes, as well as the fumigation of juniper and other woods be kept up.

2d. Lines are to be formed which are not to be tranſgreſſed by the infected, nor by the healthy; at the ſame time, proper houſes are to be allotted for thoſe who are taken down in the diſeaſe, and others for the healthy part of the family, where the diſorder prevails. Forming lines.

3d. All commerce with countries where the diſeaſe is prevalent, is to be avoided; nay ſome puniſhment ſhould be inflicted on thoſe who tranſgreſs this rule. It is an object of too much conſequence to be neglected, the lives of ſo many thouſands depending on it. Commerce forbidden.

4th. Veſſels which come from ſuch countries are to be driven from the harbour where they attempt to enter, and be obliged to unlade their goods, and properly ventilate them in ſome Veſſels not to enter harbour.

uninhabited iſland. I do not think the uſual manner in which quarantines are performed by ſhips in harbour, are by any means adequate to the purpoſe. Were the plague really on board any ſuch ſhips, forty or ſixty days, no nor any time would be ſufficient to prevent the diſeaſe, unleſs the goods were properly ventilated; bale goods being known to preſerve the infection for many years: But beſides this, it is impoſſible to keep the ſuperior officers of a ſhip from leaving it, and flying to their domeſtic manſions, to repoſe themſelves after a long and tedious voyage. The only remedy is, to appoint a place for unlading and ventilating.

Appropriating phyſicians, &c.

5th. Phyſicians and ſurgeons, and miniſters, are to be appropriated to viſit the ſick in the plague, and no others, leſt the infection may be conveyed by them to ſound perſons. The

ſame

ſame rule is to be obſerved with regard to midwives.

6th. Hoſpitals are to be provided for the poor who may be ſick of this diſeaſe, but every connection between them and their friends ſhould be prevented. Providing hoſpitals.

7th. The dead bodies are to be buried as ſoon as poſſible, and here a ſuſpenſion ſhould be made of the law againſt burying in any thing but woollen : nay that ſhould be forbidden, as it is a powerful retainer of infection. Linen here ſhould be preferred. Burying the bodies.

8th. Every thing which is capable of retaining infection, as the cloaths of the deceaſed, and the furniture of the room, ſhould be buried. This is preferable to burning. Thoſe things which retain infection the moſt, are, all ſorts of woollen cloths, ſilks, cottons, linens, the ſkins of animals, hemp and flax, &c. Cloaths, &c. burying.

8th.

Regulating food of healthy.

8th. The food of thoſe who are not infected at ſuch a time, ſhould be principally of vegetables, and of thoſe which contain the acid ſalt pretty ſtrongly, together with all ſorts of fruits. The chewing and ſmoaking of tobacco may alſo be recommended. But the beſt preſervative is a mind free from care and anxiety.

Similar diſeaſe.

II. In diſeaſes which are leſs extenſive than the plague, but ſtill highly infectious, and ſometimes dangerous, the following ſhould be regarded.

1ſt. Phyſicians ſhould ſtudy the nature of theſe remedies appropriated to them, and conſider with care what are moſt likely to remove them.

2d. The poor are to be moved into hoſpitals, and placed in wards by themſelves.

3d. The ſick, even in private families, ſhould be ſeparated from thoſe who are healthy.

4th.

4th. The healthy ſhould live upon a ſpare diet, nor indulge to exceſs either in wine or venereal pleaſures: the air they breathe ſhould, if poſſible, be purified.

5th. Chewing tobacco and other herbs, and other preſervatory medicines ſhould be uſed.

6th. Flowers growing in pots ſhould be introduced into ſick rooms, as well as aromatic herbs. This ſhould be done likewiſe in courts of judicature, where it is feared that the gaol diſtemper prevails.

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